S. Hrg. 99-58, Pt. 2

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1986

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

NINETY-NINTH CONGRESS

FIRST SESSION

S. 674

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 1986 FOR THE ARMED FORCES FOR PROCUREMENT, FOR RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, FOR OPERATION AND MAINTENANCE, AND FOR WORKING CAPITAL FUNDS, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 2

ARMY PROGRAMS
NAVY-MARINE CORPS PROGRAMS
AIR FORCE PROGRAMS

FEBRUARY 5, 6, 7, 1985

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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1986

TUESDAY, FEBRUARY 5, 1985

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

ARMY PROGRAMS

The committee met in open session, pursuant to notice, at 9 a.m., in room SR-253, Russell Senate Office Building, Senator Barry Goldwater (chairman) presiding.

Present: Senators Goldwater, Thurmond, Warner, Humphrey, Cohen, Quayle, Wilson, Denton, Gramm, Nunn, Exon, Levin, Kennedy, and Bingaman.

Staff present: James F. McGovern, staff director and chief counsel; Arnold L. Punaro, staff director for the minority; Alan R. Yuspeh, general counsel; Jeffrey H. Smith, minority counsel; Christine C. Dauth, chief clerk; Patrick A. Tucker, counsel; Gerald D. Strickler, printing and documents clerk; Judith A. Freedman and Patricia L. Watson, research assistants; William E. Hoehn, Jr., George K. Johnson, Jr., Alan Chvotkin, David S. Lyles, Carl M. Smith, James C. Smith III, John J. Hamre, Ronald P. Kelly, and Douglas R. Graham, professional staff members; and Marie Fabrizio Dickinson, staff assistant.

Also present: Gerald J. Smith, assistant to Senator Goldwater; Les Brownlee, assistant to Senator Warner; James H. Dykstra, assistant to Senator Cohen; Bernard R. Toon and Karl H. Stegenga, assistants to Senator Quayle; John Roddy, assistant to Senator East; Mark J. Albrecht, assistant to Senator Wilson; Francis J. Sullivan and Mary A. Shields, assistants to Senator Stennis; Jeffrey B. Subko, assistant to Senator Exon; Peter D. Lennon, assistant to Senator Levin; James Steinberg, assistant to Senator Kennedy; Charles C. Smith, assistant to Senator Dixon; John Rasmussen, assistant to Senator Gramm; Deforest Hamilton and Allan Cameron, assistants to Senator Denton.

OPENING STATEMENT BY SENATOR BARRY GOLDWATER, CHAIRMAN

Chairman GOLDWATER. The meeting will come to order.

We are convened today for the first of the service posture hearings. Yesterday we heard from the Secretary of Defense and the Chairman of Joint Chiefs of Staff on the overall posture of the Department of Defense.

This morning we are privileged to have the Secretary of the Army, Hon. John O. Marsh, Jr., and the Chief of Staff of the Army, Gen. John A. Wickham, Jr.

Today's Army, in my opinion, is in excellent shape. The equipment that has been authorized since 1980 is coming off the production line and is now being received by the troops in the field. The soldiers, both men and women, are sharp, and they are excited about this new equipment.

The combination of new equipment, that uses the latest technology, and of intelligent, dedicated soldiers has produced a quantum improvement in today's Army.

As I travel to Army, Navy, and Air Force installations and visit with young officers and enlisted personnel, I cannot help but be impressed with their dedication and motivation. I urge my colleagues to take every opportunity to see these young people in action and talk to them.

DIVAD

Without doubt, they are the strength of this Nation. I intend to have more of them come to testify before the committee. Last fall, when we held a special hearing on Divad, we heard from two NCO's who had spent just 2 weeks learning to operate the Divad and then had put the Divad through its paces in a demanding 10-day operational field test.

Their testimony was the most convincing evidence possible that the Divad works as it is supposed to work and that the press criticism was, to a great degree, inaccurate.

I cannot stress the importance that I place on the quality of our manpower and in that I include woman power.

During my long connection with the military I have never seen such excellent forces as we have today. I listen to the demand for decreasing the Defense budget and I just pray that we never push it so much that we get to the point that we might take reductions that will reach down to the level of these young people.

Mr. Secretary and General Wickham, your posture statement has been made available to all the members. I understand that you do not have a prepared statement, but that you would like to summarize important issues before we begin questions.

I will ask Senator Nunn to say anything he cares to.

Senator Nunn. Thank you, Mr. Chairman.

Very briefly I want to welcome General Wickham and Secretary Marsh this morning. I want to congratulate the Army for taking many bold and innovative steps over the last 4 or 5 years. I think we are moving in generally innovative directions.

We have questions about some specific objectives but I think it is a far different situation than it was 10 or 12 years ago when it was pretty much a status quo oriented Army, reflecting the climate of the times after Vietnam.

AIR/LAND BATTLE

I know in experimenting with things like Air/Land Battle, the Army and Air Force are working together better than before. I hope that will spread to all the services eventually and we will have a true unified concept.

One of the things we have to focus on this year and the coming year more than we have in the past is not the level of spending input going in the Defense budget as much as what defense capability is coming out.

As I understand it, if you look back 4 years ago, the Army's procurement account increased by somewhere in the neighborhood of 100 to 110 percent in procurement in real terms, that is above inflation. I think we have to ask what increased capabilities are we getting from that level of increase?

There is no doubt about the fact we are improving. There is no doubt about the fact in my mind the quality of the force is higher than it has been in a long, long time. I think that is a very significant achievement. But that in itself does not tell us what has happened to all the money because much of the money has gone into procurement, research and development.

I think we have to ask hard questions. Those of us who support a strong military are in a similar position to those people who advocated large increases in domestic programs in the early sixties and seventies and then spent the late seventies and early eighties, trying to defend those programs against charges of waste, charges that the programs are not working.

I think we have to ask those questions of the military much sooner than did proponents for domestic spending programs. If we do not exercise that oversight responsibility in a very diligent way, 3, 4, or 5 years from now, maybe even sooner, we will be in a similar position.

ARMY PROCUREMENT

It is instructive to compare the real increase in the Army procurement account with weapons procured. I know this is a general sweep and I will get into more detailed questions, but according to my statistics, we purchased 16 percent more tanks and combat vehicles in the 1981–1985 timeframe than we did in the 4 preceding years. Yet we put 110 percent more in real terms in procurement. Of course, there are many other items that enter this issue. This is not a total analysis. But are the outputs commensurate with a 110-percent increase in procurements inputs?

What are we getting out of the Army budget compared with the very large sums that are going into procurement? Are we getting our money's worth? Can we do better? That is the line of questions I will have.

Again, Mr. Chairman, I welcome very much working with Secretary Marsh and General Wickham today and I think they are going to be prepared to take on a lot of these necessary and tough questions.

Chairman GOLDWATER. Thank you, Senator Nunn.

Senator Thurmond.

Senator THURMOND. Thank you, Mr. Chairman.

Secretary Marsh and General Wickham, it is a pleasure to have you here today to receive your testimony regarding the status of the U.S. Army.

NEW LIGHT DIVISIONS

It is my understanding, Mr. Chairman, that the Army plans to reorganize to create five new light divisions without any increase in end strength plus significantly reducing the end strengths of the 82d and 101st Divisions.

I am concerned that this may be too many light divisions and that the Army may be driven to this because of resource allocation and not strategic imperative. It is no secret that the United States is woefully short of airlift and sealift necessary to meet our needs in a global war, but will we really need five of these divisions plus two other essentially light divisions to meet our defense needs.

Mr. Chairman, I have a few questions that I will reserve until we have received the testimony of our witnesses.

Thank you, Mr. Chairman.

Chairman **GOLDWATER**. We have a new member with us today, Senator Gramm from Texas. He is a very welcome addition to our committee. We welcome you once again.

Senator **GRAMM**. Thank you, sir.

Senator **NUNN**. I join in welcoming Senator Gramm. We are delighted to have Senator Gramm on this committee.

I thought this would be an opportune time to cut most of the military budget in Texas, but I see that is not an option. We are going to have to look elsewhere. [Laughter.]

Senator **GRAMM**. That is right.

Chairman **GOLDWATER**. I understand you gentlemen have prepared statements. If you would submit those for the record and just talk off the cuff, then we will ask you questions.

[The Army posture statement follows:]

THE POSTURE OF THE ARMY

AND

DEPARTMENT OF THE ARMY
BUDGET ESTIMATES
FOR FISCAL YEAR 1986

1775

JOHN A. WICKHAM, JR.
GENERAL, U.S. ARMY
CHIEF OF STAFF

JOHN O. MARSH, JR.
SECRETARY OF THE ARMY

TOTAL ARMY GOALS

The mission of the Total Army is to deter any attack upon U.S. National interests and, if deterrence fails, to engage and defeat any enemy in any environment.

READINESS

A Total Army prepared for the "three days of war": to **deter** the day before war; to **fight** and **win** on the day of war; and to **terminate** conflict in such a manner that on the day after war, the United States and its allies have an acceptable level of security.

HUMAN

A Total Army composed of military and civilian professionals who loyally serve their nation in rewarding careers.

LEADERSHIP

A Total Army whose leaders at all levels possess the highest ethical and professional standards committed to mission accomplishment and the well-being of subordinates.

TRAINING

A Total Army of professionals prepared to mobilize, deploy, fight, and win anywhere in the world.

MATERIEL

A Total Army equipped and sustained to win any land battle.

FUTURE DEVELOPMENT

A Total Army sensitive to innovative approaches to accomplish its mission.

STRATEGIC DEPLOYMENT

A Total Army organized, manned and equipped so as to be capable of deploying, with transportation assistance, to any part of the globe to counter a wide spectrum of threats.

MANAGEMENT

A Total Army which efficiently and effectively uses the resources made available.

AN ARMY OF EXCELLENCE: READY TODAY, PREPARING FOR TOMORROW

JOINT STATEMENT
BY

THE HONORABLE JOHN O. MARSH, JR.
SECRETARY OF THE ARMY

AND

GENERAL JOHN A. WICKHAM, JR.
CHIEF OF STAFF, UNITED STATES ARMY

BEFORE

COMMITTEES AND SUBCOMMITTEES
OF THE
UNITED STATES SENATE
AND THE
HOUSE OF REPRESENTATIVES

FIRST SESSION, 99TH CONGRESS

THE POSTURE OF THE ARMY
AND
DEPARTMENT OF THE ARMY BUDGET
ESTIMATES FOR FISCAL YEAR 1986

PREFACE

This Army Posture Statement describes the state of today's Total Army and the azimuths that will guide it as we prepare to meet the challenges of the twenty-first century. Our soldiers are proud and they are ready. Our goal is to preserve the peace by adequate preparation for war.

Faced with diverse threats in an increasingly complex world, virtually every aspect of our military capability is undergoing significant improvement. Readiness is our number one mission. It guarantees our freedom every day. Total Army Readiness is better than at any time in our recent past. We have adopted a flexible and imaginative battle doctrine, AirLand Battle. We are on the crest of the most unprecedented modernization program in the Army's history, a program which capitalizes on advanced technology and innovation. We are balancing our force structure so that landpower, the decisive arm of our national military power, has utility across the entire spectrum of conflict. We are improving substantially our ability to sustain our forces on the battlefield.

We must hold the course in successful programs, and give added attention to those in which we recognize deficiencies. We must continue the initiatives which seek to modernize our chemical and nuclear deterrent capabilities while, together with our sister services, we take steps to overcome shortages in strategic air and sea lift.

We also are focusing our efforts on other aspects of our military capability that are critical to success. These are interservice cooperation, quality of life for our soldiers and their families, and leadership. Each of these contributes directly to our ability to deter war or, if deterrence fails, to fight and win. This statement describes these programs and how they fit into our vision for the Army.

One hundred and ninety-eight years ago the framers of our Constitution empowered the Congress to raise and support armies. The progress made over the last four years reflects the leadership, understanding, support, and cooperation of the Congress and the nation. To prepare the Army for the twenty-first century will require continued, solid support.

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

JOHN O. MARSH, JR.
Secretary of the Army

A VISION FOR THE ARMY

History shows that Landpower is the decisive form of military strength, and a key element of our national military strategy. We create Landpower through the joint efforts of all services but it is the Army that is charged specifically to organize, train, and equip forces to conduct prompt and sustained combat operations on land. Our ability to do so gives the President additional options to execute the nation's foreign policy. Landpower can help avoid nuclear confrontation, respond to conflicts across the entire spectrum of violence, and deter conflict by convincing potential enemies that cheap advantage will not be obtained by conventional adventures. Today's Total Army is a substantially more capable force than it was four years ago. It represents sustainable combat power available to support national policy wherever it is challenged. Through the support and leadership of the 97th and 98th Congresses, today's Army has better people, more and better equipment, improved training programs and facilities, and better support systems. Today's Army is an Army of Excellence: Ready Today, Preparing for Tomorrow.

THE THREAT: A HOSTILE AND UNSTABLE WORLD

The Army must be prepared to cope with a broad spectrum of threats to our nation's security. These range from terrorism and low intensity conflict to high intensity hostilities. Although the most likely threats to our national security interests are conflicts of low intensity, the major security problem facing the United States is the threat posed by the military power of the Soviet Union. This is manifest in Soviet strategic power, quantitative and qualitative improvements in their general purpose forces, and geopolitical challenges heightened by a growing Soviet ability and willingness to project military power beyond their borders. Unanswered, these capabilities constitute a direct threat to U.S. global interests.

SOVIET GROUND FORCES

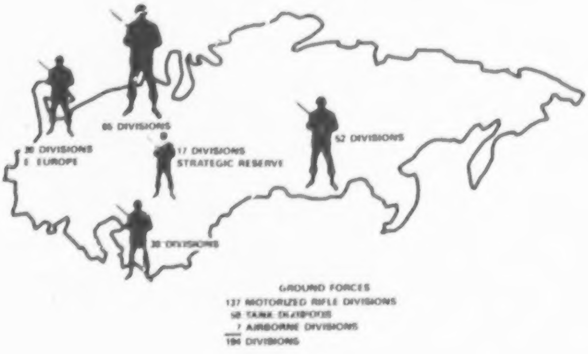


Figure 1.1

SOVIET FORCES

The development of Soviet forces is based upon Soviet perceptions of the nature of future war in light of new technologies. They believe that the geographic scope of operations, maneuverability of fires and forces, and war's military-economic potential will reach unprecedented levels. They believe the initial period of war will be decisive and that Soviet forces must and can change the correlation of military forces dramatically in the opening days and weeks of war.

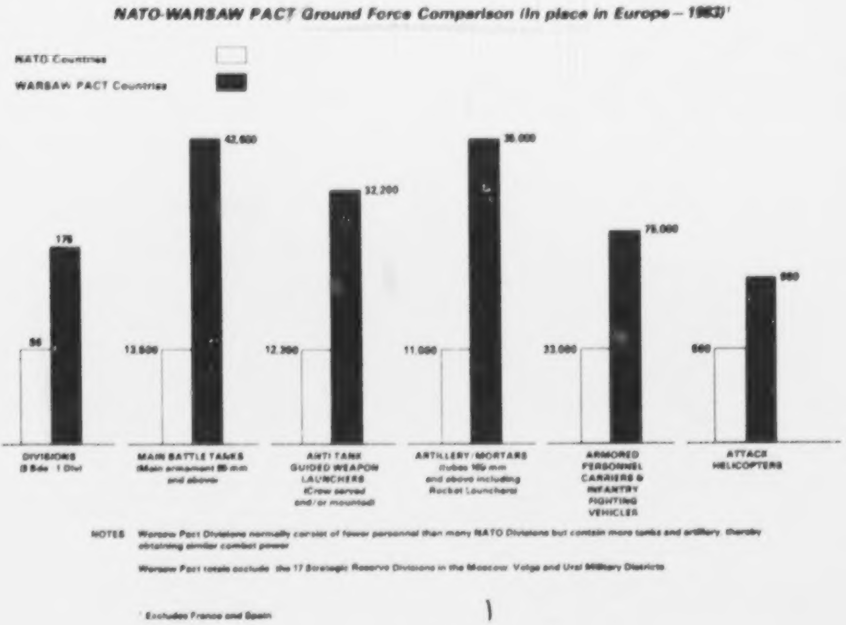


Figure 1.2

Soviet combined arms forces will operate according to a new, higher-level concept, the "Theater Strategic" Operation, which calls for a single high command to conduct multiple front operations for 20-30 days, to a depth of 1,000 to 1,200 kilometers, across a front of 700 to 750 kilometers. Recent and ongoing force developments that support the Theater Strategic operation include:

Reorganization of air and air defense forces.
Modernization of weapon systems.
The Operational Maneuver Group (OMG) concept.
Increased helicopter support.
Increased artillery for regimental maneuver forces.
Nuclear capable artillery.
Improved short-range ballistic missiles.
Continued growth of sustainability.

Production of Ground Forces Materiel
USSR/NSWP and NATO[1]

Equipment Type	1979		1980		1981		1982		1983		1983
	USSR	NSWP	USSR	NSWP	USSR	NSWP	USSR	NSWP	USSR	NSWP	NATO
Tanks	3,500	800	3,100	700	2,000	520	2,500	600	2,700	560	1,850
Other Armored Fighting Vehicles	6,000	1,800	6,500	1,300	5,200	1,300	4,500	1,400	4,500	1,300	2,280
Towed Field Artillery	1,400	150	1,400	150	1,600	200	1,800	250	1,700	300	325
Self Propelled Field Artillery	900	10	900	50	1,000	50	1,100	50	1,100	100	185
Multiple Rocket Launchers	600	150	700	150	700	150	700	100	700	100	95
Self Propelled AA Artillery	300	100	300	100	300	50	200	50	100	0	0
Towed AA Artillery	—	200	—	150	—	250	—	200	—	225	125

[1] Revised to reflect current total production information. Includes United States, excludes France and Spain.

Figure 1.3

GEOPOLITICAL THREATS

Soviet geopolitical challenges aimed at reducing or displacing U.S. influence must be viewed against the backdrop of Soviet military might. For at least the next two decades, military power will be the primary basis for the U.S.S.R. claim to superpower status. In Europe and the Pacific the risk of war with the U.S.S.R. will grow if U.S. military strength is not maintained. At the same time, conflicts sparked by activist groups and terrorists — particularly in Southwest Asia, the Middle East, Latin America, and Africa — are more likely. In the Third World, the Soviets continue to exploit indigenous tensions and conflicts to reduce Western influence and to expand their own.

Major Soviet Equipment Delivered to the Third World 1978-1983

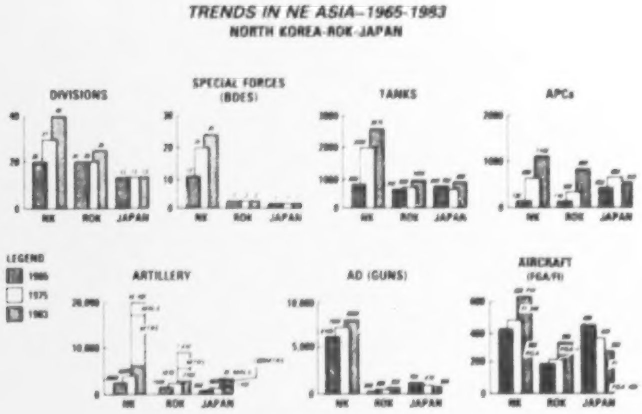
	Total	Near East and South Asia	Sub-Saharan Africa	Latin America	East Asia and Pacific
Tanks/Self-propelled Guns	7,390	5,245	1,090	275	780
Light Armor	10,040	7,910	1,650	175	305
Artillery	10,945	6,670	2,625	820	830
Major Surface Combatants	38	24	5	3	6
Minor Surface Combatants	150	19	42	34	55
Submarines	10	7	0	3	0
Missile Attack Boats	57	28	10	11	8
Supersonic Aircraft	2,465	1,765	200	195	305
Subsonic Aircraft	225	115	60	0	50
Helicopters	1,240	830	155	85	170
Other Combat Aircraft	395	130	80	70	115
Surface-to-Air Missiles	10,315	7,575	910	720	1,110

Figure 1.4

The dangerous Soviet-Syrian connection, the precarious regional balance, and the Iran-Iraq war make the Middle East/Persian Gulf a volatile and dangerous region to Allied and U.S. interests. The interdependence of Free World economies and the dependence of Western Europe and Japan on Southwest Asian oil resources, when combined with the politically volatile nature of the region, increasing Soviet presence and East-West competition for influence and access to this vital region, create an environment for possible superpower conflict. Moreover, our involvement in Lebanon, U.S.-Israeli strategic cooperation, and the perception that the United States has been unable to honor requests for transfer of sophisticated arms to Arab states, have decreased Arab confidence in our ability and willingness to respond to Arab requests for assistance and to meet our stated security commitments in the region.

Soviet and Cuban initiatives in Central America and the Caribbean basin have elevated the importance of this sub-region. While the combined regional military response in Grenada resulted in more caution and a lower profile by Havana and Moscow, the long-term threat has not been eliminated. This threat has three dimensions for U.S. foreign policy: its effect on the U.S.-Soviet strategic balance, its disruptive effect on regional peace and stability, and its effect on East-West competition in Africa and other regions where Soviet-Cuban power projection continues.

Growing Soviet military power and North Korea's increasing military strength demand a strong U.S. military presence in Northeast Asia to support our treaty commitments with Japan and the Republic of Korea.



TRENDS IN NE ASIA—1965-1983
NORTH KOREA-ROK-JAPAN

Figure I.5

Africa will also remain volatile for the foreseeable future. Internal antagonisms and perennial regional tensions occasionally will flare up in violence, frequently without warning or from unexpected quarters. Most African nations will try to walk the nonaligned path and benefit from superpower competition for regional interest.

In Southeast Asia, Vietnamese expansionism, supported by the Soviets, threatens our ASEAN friends, especially Thailand. In the Philippines, popular discontent with economic conditions and the declining political legitimacy of the central government, both complicated by a growing Communist insurgency, could lead to increased instability.

LOW INTENSITY THREATS AND TERRORISM

U.S. global policy supports the maintenance of peace and political stability in the third world. Unfortunately, popular unrest caused by economic hardships, religious differences, social injustice, and the persistence of traditional international animosities, pose constant threats to third world peace and stability. These threats take the form of coups d' etat, insurrection or guerrilla insurgency, local conflicts in which a friendly government is invaded, terrorist actions, or any of the above in which Soviet proxy forces play a significant role. A growing cause for international concern is the increasing offensive use of chemical weapons in Third World countries.

The United States has entered its second decade of contending with the threat posed by terrorists around the world, particularly in Western Europe, Latin America, and the Middle East. United States facilities, activities, and personnel continue to be prime targets for terrorist attacks. The propagation of terrorist violence shows no sign of abating and most likely will increase.

SOVIET WEAKNESSES

Even though Soviet military capabilities continue to improve and expand, they do so within certain constraints. Although no single weakness appears capable of seriously debilitating overall Soviet military capability, the cumulative effect of a number of vulnerabilities poses a potentially significant threat to the successful execution of Soviet plans. These vulnerabilities include the reliability of Warsaw Pact forces, discipline and morale problems among Soviet national minorities, the Soviet need for Western technology, stagnation of the Soviet economy, and the complexity of large-scale, high-tempo combined arms operations.

SUMMARY

Barring major changes in U.S. security commitments, the range of threats the Army must prepare for is wider and greater than at any time since World War II. It promises to remain so for the remainder of the century. Although general war is the least probable form of conflict today, its consequences would be the most disastrous. More probable contingencies are regional conflicts in the Middle East, Asia, or Latin America. At a time when the United States has relatively fewer resources and far greater commitments, we face a world scene where U.S. interests are likely to be threatened increasingly by low intensity conflict, and by a powerful adversary bent on global superiority, projecting power throughout the world, directly and through surrogate states.

THE RESPONSE: 28 DIVISION TOTAL ARMY

OVERVIEW

In an age of strategic nuclear parity, landpower is taking on increased importance as the burden of deterrence shifts to conventional ground forces. Landpower provides both a deterrent and a war fighting capability. Landpower's utility stems from its capability to exercise direct, continuing, and decisive control over land, resources, and people. Land forces symbolize the most basic national commitment to the support of national goals and policies.

A strong deterrent capability must be maintained in Europe, Southwest Asia, and Northeast Asia. Outbreaks of conflict in these areas of the world could escalate rapidly if they are not deterred or controlled. The Army, the mainstay of American landpower, must organize, train, and equip its forces first to deter, and second, if deterrence fails, to fight and win. To accomplish these tasks, we are shaping today's Army to meet tomorrow's challenges. We are increasing the strategic utility of the Army by developing forces that are more lethal, flexible, responsive, and deployable. We are creating a more balanced force of heavy, light, and special operations forces capable of responding to the full spectrum of existing and anticipated threats. Military support and assistance enhances stability in troubled areas of the world and improves prospects for deterring conflict.

We are embarked on a program that will make the Army even more capable tomorrow. As a national imperative, we must sustain our conventional forces and make a concerted effort to improve our ability to mobilize the Reserve Components, rapidly expand the training base, and surge our industrial capacity.

Military capabilities are generally defined in terms of readiness, modernization, force structure, and sustainability. To these "pillars of defense," we add cross-service cooperation or "jointness", and two key intangibles, quality of life, and leadership. The state of each is discussed below.

READINESS

Readiness, our most important task, has improved significantly. However, deficiencies remain and their correction will require continued investment. Units must be supplied with modern equipment and munitions to meet their wartime requirements. We must overcome weaknesses in chemical deterrence and shortfalls in strategic lift. We must provide realistic, challenging training for the Total Army.

We are making significant progress. Effects of equipment modernization are readily apparent. Increased prepositioning of equipment in Europe reduces deployment times and strategic lift requirements. The National Training Center (NTC) provides an unprecedented jump in our ability to conduct effective battalion- and brigade-size combined arms training. Increased emphasis is accorded to joint and combined training exercises to develop the inherent capabilities of our modern weapons systems and new tactical organizations. Programs to remedy deficiencies in chemical and nuclear deterrence are found later in this statement.

Today's soldiers are at the top of the scale. With high quality men and women joining the service, the state of discipline is superb; the indicators of morale and discipline are at all-time highs. Also the quality of leaders, noncommissioned officers and officers, is the best we have seen and is improving steadily. In-service education programs, solid professional training on war fighting, tough physical fitness development, and heightened attention to development of character as well as personal excellence all contribute to quality leadership of a quality Army.

If we go to war tomorrow, it will be the Total Army that fights the battle, wages the war, and secures the peace. The constrained 780,800 member end-strength of the Active Component postulates continued reliance on Reserve Component units, many of which must achieve wartime availability dates virtually equivalent to the Active Force. Increased reliance on the Reserve Components mandates that their readiness be increased and maintained. Unit drill strength is up significantly in the Reserve Components. Full-time manning is growing. Extensive overseas training is taking place, and tough field training is on the upswing to include training at the NTC. Continued programmatic support for improvements in full-time Reserve Component manning and other readiness initiatives are underway.

MODERNIZATION

True readiness demands forces armed with effective equipment and practiced in its employment on the battlefield. We continue with our equipment modernization program, the most extensive in our peacetime history. Over 2,300 Abrams tanks, 1,400 Bradley fighting vehicles, 100 Multiple Launch Rocket Systems, and 550 Blackhawk helicopters have already been distributed in both Active and Reserve Component units. Delivery of 11 Apache helicopters was completed in October 1984. Total Army funding of these systems will be completed in the mid-1990's. Under the policy "the first to fight is the first to be equipped," the Reserve Components are getting both new, first line, and top quality second line equipment. In FY 84, over $900 million dollars worth of equipment was issued to the Guard and Reserve, and, in FY 85 we plan to issue over $1.4 billion worth. Over the next five years, the Reserve Components will receive over $5 billion worth of equipment.

DOCTRINE

We are revamping our doctrine based on analysis of the threat, technological advances, and the nature of future conflict as well as lessons learned from recent hostilities. The Army's operational doctrine is AirLand Battle. It's intended to be supportive of NATO's approved doctrine of Follow-On Forces Attack. AirLand Battle seeks to exploit the full potential of U.S. forces by blending two concepts: attacking the entire enemy force to its full depth, and synchronizing all available combat means, both Army and other services, to attain that end. AirLand Battle seeks operational success through a disruption-destruction sequence in which uncommitted enemy forces are first discovered, disorganized, and fragmented —then defeated in detail. This occurs simultaneously with enemy defeat at the forward line of troops. Relying on seizure and retention of the tactical initiative, AirLand Battle confronts the enemy with a succession of unforeseen threats more rapidly than he can react to them, resulting in the destruction of the enemy forces.

FORCE STRUCTURE

While we modernize our units, we are maintaining a proper balance in our force structure between heavy and light forces. Predominantly heavy forces are necessary to protect our security in Europe, and, to a lesser degree, in Korea and the Persian Gulf. Light forces are essential for those contingencies calling for rapid response and strategic deployment. Deployability equates directly with deterrence. Special Forces and Ranger units are needed to meet the exigencies of terrorism and unconventional warfare, as well as combat operations all across the spectrum. Military support and assistance are needed to implement pre-crisis measures that sow the seeds of stability in the Third World.

The key to modernizing and improving the strategic as well as tactical mobility of our light forces is the new light infantry division. Its rapid deployability increases our strategic responsiveness. Although only slightly over 10,000 soldiers strong, the light division has a higher "tooth-to-tail" combat ratio than other divisions. It will deploy overseas in one-third the time needed by current divisions. The light division is configured primarily for low-intensity conflicts; however, it can be employed in mid-to-high intensity operations by augmenting its combat power and sustainability with tailored corps units and employing it selectively in restricted terrain or urban areas.

At the other end of the force structure, our armored and mechanized divisions are being realigned to streamline certain combat, combat support, and combat service support elements. These heavy division initiatives will increase the leader-to-led ratio and provide more combat power directly to the corps commander as required by AirLand Battle doctrine.

SUSTAINABILITY

Logistic support for our forces has improved substantially. Increasing the fill of our wartime equipment stocks in Europe and Korea has reduced deployment times and strategic lift requirements. Increases in depot maintenance funding have reduced maintenance and repair backlogs. A greater inventory of war reserve stocks will help sustain our combat efforts until the nation's production base can accommodate wartime resupply demands. Significant gains have been made in these areas; however, much work remains.

JOINTNESS

The Army cannot accomplish its many diverse and geographically distant missions without the support of our sister services. Readiness demands that the operative elements of military strategy — landpower, seapower, and airpower — work together, in coalition with our allies, to protect our national interests. On May 22, 1984, the Chiefs of Staff of the Army and the Air Force signed a Memorandum of Agreement that provides for better coordination of budget priorities, elimination of duplicative functions, and more efficient combat operations in wartime. A similar initiative addressing strategic sealift and cargo off-load programs was signed by the chief logisticians of the Army and the Navy. To implement these initiatives the service Programmers have signed an all-service Memorandum of Agreement on cross-service participation in the program and budget development process. These procedures will insure the exchange and review of other-service programs before final decisions are made on items of mutual interest. These initiatives will expand coordination and cooperation between the military services in peacetime and will ensure effective joint operations in war.

QUALITY OF LIFE

Our most important mission is to maintain the readiness of the Army in order to protect this great nation. Readiness is inextricably tied to soldiers' morale and discipline, and to sustaining their families' strength. It's been said that the Army enlists soldiers but retains families. To the extent we have cohesive units and families that feel good about Army support, we have soldiers who will go the extra mile for readiness and for combat.

The men and women serving in the Army today are extraordinarily excellent. This quality must be maintained because, with the small Active Army, soldier quality is important as "seed corn" for mobilization and for meeting the broad spectrum of missions short of mobilization. Greater efforts will be required to recruit and retain quality soldiers and their families as the body of potential enlistees declines and the economic vitality of the nation returns. The soldier, the Army, and the nation are better off to the extent we can make soldiers and their families feel better about the Army.

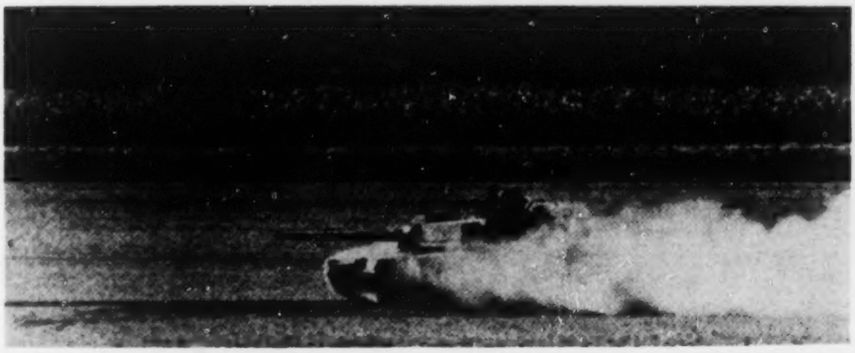
We must continue to improve the quality of life of our soldiers and their families through continued pay comparability, benefit retention, and improved living and working conditions. In 1984, the Army theme was the "Year of the Army Family." Much was accomplished to increase the sense of partnership, wellness and community that exists between the soldier, his family and the Army. Adequate resources to recruit and retain quality soldiers must be available if we are to maintain a relatively smaller yet qualitatively superior Army.

LEADERSHIP

In 1985, the Army theme is "Leadership." As the Army moves to the future, strong leadership will be necessary to provide direction and focus. We must ensure that the warrior spirit, the determination to fight when called upon, includes a strongly held conviction that good leaders care deeply about soldiers and their families. The human dimension must undergird all of our efforts — it is the essential ingredient that will make the difference in peace or in war.

SUMMARY

The Total Army is moving forward to improve the military capability of its forces. We are creating an Army that, in a strategic sense, has more utility across the entire spectrum of conflict — an Army that is ready today and preparing to meet tomorrow's challenges. The Army today is proud and ready.



Gallsbach, West Germany...U.S. Army M-1 "Abrams" tanks make their European Field Training debut during the NATO Exercises

Ranger Training

THE ARMY OF TODAY
The 28 Division Total Army

Today's Total Army can be counted with the best. It is more combat ready than at any time in recent years. Today's Army is trained better, equipped better, and made up of the best servicemen and women ever to wear the uniform. Improvements have been both quantitative and qualitative. They reflect a systematic approach to upgrading the capabilities of the total force. This approach has changed almost every aspect of the Army. Today's Army is a dynamic force in transition, designed to meet the nation's need for usable landpower throughout the remainder of this century.

Last year debates in both the Congress and the media addressed the readiness of the Army in terms which may have presented a misleading picture to the American public. Much of the substance of these debates focused upon the Army's Unit Status Reporting system. This system performs well in measuring certain quantifiable factors which are important in the comparison of units. However, it is not a comprehensive measure of a unit's capabilites because it fails to take into account less tangible factors that are inseparable from the readiness equation. Some of these are better quality personnel, improved equipment/weapons capabilities, morale, esprit, cohesion, and various factors of sustainment.

Readiness is as dynamic as the threat and must be redefined continually as the threat evolves. The ability to define the relationship between resources and readiness is a difficult problem that is receiving emphasis within the entire defense community. To this end, Readiness Information Exchanges are conducted semi-annually. They bring together analysts and managers from the Department of Defense (DOD), other governmental agencies, academia, research firms, and industry to share ideas and concepts. Within the Army there are numerous initiatives designed to relate resources to readiness, to allow us to manage better, and monitor the day-to-day capability of the force more accurately. A new technique titled "Measuring Improved Capability of Army Forces (MICAF)" is being developed to evaluate changes in a unit's capabilities as new, modernized systems are fielded. This methodology has matured to the point where it is now a valuable supplement to the Unit Status Report. MICAF provides a measure of the increased war-fighting potential that a unit realizes as a result of new equipment fielding. MICAF data is available for all divisions.

The Army in 1985 bears little resemblance to the Army of 1980. The Army has embarked upon a path that will ensure the security of the United States for the years to come. Our effort has involved the correction of equipment shortages, the modernization of selected weapon systems, the procurement of spare parts, and the tailoring of our organizations to meet the developing threat. The reorganization associated with this effort has been unprecedented in the history of our Army. New organizations such as leaner more capable heavy divisions, the new light infantry divisions, and elite Special Forces and Ranger units provide greater battlefield capability and enhance deployability. Improvements have touched every aspect of the Total Army, both Active and Reserve Components. We must continue our efforts if we expect to provide the umbrella of a solid defense over the long term.

The most critical problem affecting Army readiness continues to be shortages of equipment required to fill the Army's force structure. The problem of equipment shortages is one of long standing. Realistically it will not be solved in a short period of time. To meet the equipment needs of the total force, the Army has practiced a policy of equipping first those units which will fight first, Active and Reserve. Lower priority units have not been equipped in as timely a manner as the Army would like. The FY 86 Budget supports all elements of the Total Army. The procurement requests will allow continued improvement in the readiness and capabilities of our total force.

M2 Bradley - Winter Training

DOCTRINE FOR TODAY—THE AIRLAND BATTLE

The Army's combat doctrine is called the "AirLand Battle". AirLand Battle seeks to exploit the full potential of U.S. forces by blending two concepts — attacking the entire enemy force to its full depth and synchronizing all available means of combat power, our own and those of the other services to attain that end. AirLand Battle is based on securing the initiative and exploiting it vigorously to defeat the enemy force. AirLand Battle is the doctrinal lever which, combined with qualitatively superior forces, will permit a numerically inferior army to prevail on the battlefield.

AirLand Battle is not something to be attained in the future. It is today's doctrine for today's Army, one which will serve the Army well into the future. This doctrine influences all aspects of Army activity. It guides the way the Army organizes and equips its forces, trains its soldiers and prepares its war plans. AirLand Battle is the basis for requirements for all new Army organizations and weapon systems. It guides what we buy and provides direction to our research and development.

The Army seldom will fight alone. Since April 1983, the U.S. Air Force has agreed to use AirLand Battle doctrine in conjunction with its Aerospace Operational Doctrine as the basis for joint combat operations. When Army forces are deployed in allied or coalition operations, U.S. Army doctrine is adapted to correspond to allied political and military guidelines, doctrine, procedures and operations plans. In NATO, for example, U.S. Army operations are governed by NATO strategy and Alliance doctrine including the Follow-on Forces Attack concept.

STRUCTURING THE FORCE

Today's Army has been modified to capitalize on technology and to employ the AirLand Battle doctrine in diverse and distant geographic settings in response to a broadening spectrum of threats. This effort has resulted in the creation of a balanced force of heavy, light, and special operations units, streamlined to execute AirLand Battle doctrine, alone, or together with our allies. The Army is organized to employ most effectively the modern equipment now coming on line. It is sustainable on the integrated (nuclear, chemical, electronic warfare) battlefield. This restructuring has been constrained deliberately by a fixed Active Component end strength because of readiness and sustainability requirements. This has led to the integration of Reserve Component units with the active force to a degree unprecedented in recent history. Just as in the past, today's active Army can meet no major contingency without the Reserve Components. The Total Army is no longer just a concept. It is a guiding principle. Major force design initiatives include:

— Activation of the seventeenth and eighteenth Active Component divisions, the 6th Division and the 10th Mountain Division (Light Infantry), each with two active light infantry brigades and one reserve component light infantry brigade.

— Refinement of the design for heavy divisions.

— Retention of Reserve Component roundout brigades.

— Reconfiguration of the 7th Division to the light infantry design.

— Continued organization of a Reserve Component mechanized division (35th) and activation of a light infantry division (29th).

— Provision for a second combat aviation company for the light infantry division.

— Provision for additional corps support units to support the light infantry division.

As of September 1986, the Total Army Force authorizations mix by percentage of combat function is programmed to be:

	Active	National Guard	Army Reserve
Combat	49	44	7
Support	48	19	33

By percentage of combat function within each component:

	Active	National Guard	Army Reserve
Combat	52	71	19
Support	48	29	81

Heavy Forces. Heavy forces are designed to fight the AirLand Battle on integrated battlefields. The design models have been titled "Division 86" and provide for an armored division of about 16,500 members (6 tank, 4 mechanized battalions) and a mechanized infantry division of 16,800 (5 tank, 5 mechanized battalions). Original Division 86 designs have been refined to increase operational flexibility and to implement AirLand Battle doctrine. Certain functions previously associated with division level operations have been shifted to corps. At the same time, there has been an increase from three to four in the number of tank and infantry companies assigned to maneuver battalions. These companies are being equipped with the M1 Abrams tank and M2 Bradley Infantry Fighting Vehicle. The forward support battalion concept has been adopted in the division support command to provide a forward support battalion to each brigade and a main support battalion within the division rear area. A long range surveillance detachment has been placed in the divisional cavalry squadron. The sound and flash platoon and division artillery observation and lasing teams have been deleted. Infantry squads and 155mm howitzer sections have been reduced to nine men each. The Multiple Launch Rocket System is retained as a divisional weapon. During FY 86 heavy forces in both Europe and CONUS will continue conversion to the refined unit designs as associated new equipment is fielded and facilities become available. Reserve Component affiliation with selected units continues, with roundout units converting to new unit designs about the same time as their associated Active Component unit.

Light Forces. In 1983 the Army completed an extensive review of force structure, dispositions, national strategy and the changing world situation. That review concluded that modernization of our light forces was essential, both to respond to emerging low intensity threats and to improve our ability to execute AirLand Battle. Light forces, correctly employed in urban areas and close terrain such as forests, can free armored and mechanized forces to counter the enemy on more suitable, open terrain. Their increased strategic mobility permits an early commitment of forces to a developing situation at the lower end of the spectrum of conflict, possibly avoiding the choice later of a larger commitment or abandoning the field. Guidance for the design of the Light Infantry Division required that it be able to deploy in approximately 500 C141B sorties, contain approximately 50 percent infantry, and that it include innovative, lethal and flexible capabilities as well as a relatively austere support base.

During FY 85 the 7th Infantry Division converts to the light infantry design. The division is also undergoing a fine tuning process aimed at ensuring all aspects of the division design are compatible with planned roles and missions. A comprehensive training strategy has been developed for the light divisions. It will be implemented initially by the 7th Infantry Division.

In FY 85 the Army will activate a new division, the 10th Mountain Division (Light Infantry), at Fort Drum, New York. Combining force structure and Year of the Family initiatives, the units of this division will be formed as family housing, built by Army, New York State, and private funds, becomes available. This pacing factor, Army family housing, assures that soldiers and families will have a place to live in an area that currently has an accute housing shortage. The Army is also evaluating the use of private financing for the facilities to be built for the new division. This financing approach is expected to build the required facilities more quickly as Fort Drum converts from a summer reserve training installation to a modern full spectrum division post. As the division grows, the work force at Fort Drum will grow to support it. The Army will expand the existing work force using competent contractor support to the maximum extent economically possible.

In connection with the stationing analysis conducted for the 10th Mountain Division, and as a result of a broader examination of our strategic and force posture, the Army concluded that strengthening of our forces , particularly in Alaska, was needed. Accordingly, the Secretary of Defense approved activation of a second new division, designated the 6th Infantry Division. This division will be a light infantry division, tailored for defense of Alaska. The division will be formed in FY 86 using the 172nd Infantry Brigade, currently stationed in Alaska, as the nucleus. A second active brigade will be added in FY 87. Both the 10th Mountain and 6th Infantry Divisions will be rounded out with existing Reserve Component brigades.

During FY 86 activation of the 10th Mountain Division will continue with the addition of two active brigades. A light infantry division will be formed from units of the Maryland and Virginia Army National Guard (29th Infantry Division).

Air Assault and Airborne Divisions. On 23 August 1984, the Army adopted in principle the recommended force designs for the air assault and airborne divisions. The air assault division is programmed to begin conversion to the new design in FY 86; the airborne division is scheduled to convert to the new design in FY 87. The airborne and air assault division structures are based upon the light infantry division force design modified in consideration of unique mission requirements, habitual association, and the need for specialized training. Both divisions were provided a broader range of communications assets, organic nuclear, biological, chemical (NBC) decontamination assets, more heavy anti-armor assets, and a third medical area support company. Redesign of XVIII Airborne Corps units above division level has begun and will provide support for all functions transferred from division to corps level. The major unique organization assigned the air assault division is a combat aviation brigade. Its design includes a general support aviation battalion, two combat support aviation battalions, four attack helicopter battalions, a medium helicopter battalion, and a cavalry squadron.

2d Infantry Division. Initial design work has begun for the 2d Infantry Division. The unique requirements of a forward deployed division without a normal corps support structure will be considered as efforts are made to increase firepower and modernize organizations while remaining within current personnel authorizations.

Reorganization of the 9th Infantry Division as a High Technology Motorized Division (HTMD). The 9th Infantry Division has been tasked to develop innovative tactics and equipment that will evolve into a new type division. In December 1984, the Army leadership approved a revised division design for a High Technology Motorized Division (HTMD). The design includes three infantry brigade headquarters and nine maneuver battalions. Five are Combined Arms Battalions, Heavy. Two are Combined Arms Battalions, Light. Two are Light Attack Battalions. The division has a unique fourth maneuver brigade called the Cavalry Brigade Air Attack (CBAA). The division's innovative tactics and equipment emphasize high tactical mobility combined with extensive firepower approaching that of the heavy division, while retaining strategic mobility comparable to the light division. The 9th Infantry Division (HTMD) is designed primarily for use in Southwest Asia, as part of the Rapid Deployment Force, however, the design retains utility for use in NATO and other theaters. The division will continue to be a test bed for new ideas and concepts on tactics, organization, doctrine, and accelerated equipment acquisition.

The Corps. AirLand Battle doctrine calls for the corps commander to have greatly increased responsibility for fighting the critical deep battle. Redesign of corps units has begun in order to provide the corps commander the necessary assets. Corps designs are based upon the most up to date division designs and upon prudent assumptions where division and separate brigade designs have not been completed. The alternative corps designs incorporate the following changes:

— Increase the strength of the command operations battalions and area signal battalions in the corps signal brigade.

-- Add Chaparral and Hawk battalions to the Air Defense Artillery brigade (transfer of division Chaparral).

— Strengthen the Corps Military Police brigade.

— Transfer of 8-inch Field Artillery to the Corps.

—Convert cannon artillery battalions to three batteries of eight pieces.

—Add Multiple Launch Rocket System battalions and a corps target acquisition battalion with a remotely piloted vehicle battery to corps artillery.

— Add attack helicopter battalions to the corps aviation brigade.

— Allocate a separate light infantry brigade to each Corps for rear area security and other missions.

— Reduce active component units in the military intelligence brigade; increase of reserve component units.

Special Operations Forces (SOF). Modernization of the Army's Special Operations Forces (Special Forces, Rangers, Psychological Operations, Civil Affairs and Special Operations Aviation), continues to receive high priority. These forces are an essential element of the total force. They add to our capability and effectiveness by providing increased flexibility and freedom of action to the National Command Authority. SOF extend conventional capabilities at the lower end of the spectrum of conflict. They complement our capabilities at the higher end.

Sizable reductions in SOF were made in the immediate post-Vietnam era. The need for additional forces was recognized in 1980 and programmed expansion began. A SOF Master Plan was approved by the Secretary of the Army in April 1984. This plan guides our enhancement effort and identifies requirements for the period FY 86-90. During FY 86, manning levels of Active Component Special Forces Groups will be increased as will that of Headquarters, 1st Special Operations Command. Growth trends for Active Component operational SOF manpower and funding are shown below.

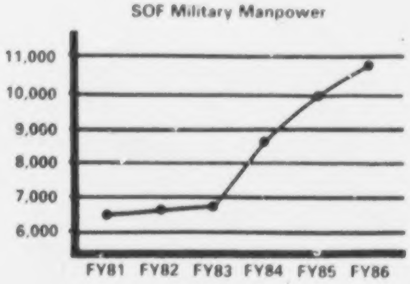

SOF Military Manpower

Figure 2.1

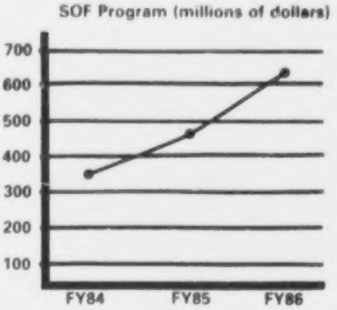

SOF Program (millions of dollars)

Figure 2.2

A significant element of the Army's special operations forces is in the Reserve Components . Reserve Component Special Forces units are in both the National Guard and Army Reserve. Psychological Operations (PSYOPS) and Civil Affairs (CA) units are predominantly Army Reserve forces. Operational concepts are being developed and reviewed for PSYOPS AND CA which may lead to the development of new tables of organization and equipment (TOE). The modernization of SOF units is extensive because much of the required equipment is unique to Special Forces and Psychological Operations units.

Aviation support for special operations is an important joint service responsibility. The Army and Air Force will continue to improve their respective SOF aviation capabilities. The Army will provide the preponderance of the rotary-wing support. The Air Force will emphasize fixed-wing assets.

National Guard Force Structure. In FY 85 Army National Guard force structure actions will include continued organization of the 35th Infantry Division (Mechanized). Reactivation of this division began in FY 84. It was formed from existing National Guard units located in Kentucky, Nebraska, Kansas, Missouri, and Colorado. By the end of FY 86 the 35th Division will have all its units with the exception of one armored battalion, its air defense artillery battalion, and a target acquisition battery. In FY 85, organization of the Army's only Reserve Component Mountain Battalion will be completed in the Vermont Army National Guard. In FY 86, the Army National Guard will begin organizing the 29th Infantry Division.

The 29th will be the first light infantry division in the National Guard. The maneuver brigades for the division will be furnished by the 58th Infantry Brigade, Maryland Army National Guard, and the 116th Infantry Brigade, Virginia Army National Guard. The headquarters will be located at Fort Belvoir. Remaining force structure for the division will be organized through activations and conversions of existing units in Maryland and Virginia. Beginning in FY 85 and continuing through FY 86 the three Army National Guard heavy divisions will convert to the Division 86 design. A total of 27 activations and 263 conversions are planned for the National Guard in FY 85; 80 activations and 92 conversions are planned in FY 86.

Reserve Component Management Structure. In response to long-standing Congressional concerns, the Army has completed the principal phases of a major reorganization in the Forces Command Reserve Component Management Structure. On 1 October, 1984, a full year ahead of schedule, the remaining Army Readiness and Mobilization Regions were discontinued and the Fourth U.S. Army was established. The resulting structure, with five Continental U.S. Armies and no Readiness Regions, eliminates one layer of supervision and provides increased responsibility to the Army National Guard and Army Reserve as their role in national defense continues to grow. In 1985 the Army will further evaluate Forces Command recommendations for refinements to the Army Reserve structure.

Army-Air Force Joint Force Development Process (JFDP). The Army-Air Force Joint Force Development Process (JFDP), initiated by the Memorandum of Agreement discussed earlier, was the culmination of a six month effort to design and field the most effective, affordable forces in support of airland combat operations. The memorandum specified 31 joint initiatives that will significantly enhance the country's military posture and have a major positive impact on the way future combat operations are conducted.

The services have implemented 9 of the 31 initiatives. The remaining initiatives will be completed or have a firm plan of action early this year. The Joint Force Development Process has resulted in a formal process for cross-service participation in the Program Objective Memorandum development at the general officer level, the establishment of a Training and Doctrine Command and Military Airlift Command joint intratheater airlift office to determine joint requirements, restructuring of the Joint Surveillance and Target Attack Radar System and the Joint Tactical Missile System, and several agreements to improve joint war fighting doctrine.

The Army and Air Force view the JFDP as an initial step in the establishment of a long-term, dynamic process. The program's objective is to maximize our joint capability to execute airland combat operations. Failure to implement JFDP will result in the development of separate and potentially redundant programs, forces, and procedures that will make less effective use of limited manpower and resources and reduce national war fighting capability.

Being all you can be

MODERNIZING AND EQUIPPING THE ARMY

The Army's goal is to provide the American soldier with better equipment than his enemy. We can point to some solid achievements in this effort. Systems such as the M1 Abrams tank, the Bradley Fighting Vehicles, Multiple Launch Rocket System, and Blackhawk helicopters are being fielded with great success. What we hear from soldiers and from opposing force commanders in battlefield exercises is that these systems are adding a new dimension to combat capability. The Apache attack helicopter, Patriot, and a host of other systems will soon provide our soldiers more of the qualitative edge they will need on the modern battlefield.

An equipment balance must be achieved between our heavy and light forces; between our combat and support units, and between forward-deployed and augmenting forces. There must also be a balance between Active and Reserve Components, always ensuring that equipment goes first to those units that are the first to fight. From the standpoint of acquisition, we must also have a balance between research, development, procurement and sustainment of equipment. For all of this to work, we must acquire equipment in battalion unit sets. It does little good to provide a unit with new M1 tanks if the supporting equipment is not present. If, because of budget fluctuations, the number of tanks purchased is changed, the corresponding support equipment must be adjusted. Similarly, changes in procurement levels for support equipment may require corresponding changes in end item procurement.

As we improve our management of programs, we need to explore more innovative methods of doing business. We have institutionalized many of the acquisition improvement initiatives begun over the past few years. We continue to work closely with industry to find better, more cost effective and more efficient ways to develop, procure and field equipment.

The importance of a solid and continuous research and development program cannot be emphasized enough. We cannot yield both quantitative and qualitative advantages to a potential enemy and expect our soldiers to prevail. The Army is attempting to focus on the most promising "high-leverage" technologies, then accelerate their transition from the demonstration state to the battlefield. The soldier remains the key focus as we develop equipment.

As we address some of the highlights of our research, development and acquisition programs another common thread will become clear. We are not only modernizing through the introduction of new equipment into the force, but product improving many existing items in the Active and Reserve Components. We are acquiring more "non-developmental" items, that is buying off-the-shelf technology and equipment where possible, and fielding it quickly. We have active programs to determine what is required for mission essential equipment to survive on a nuclear and chemical battlefield and to ensure those criteria are met.

It should be noted that the Army has accelerated equipment modernization of the Reserve Components to enable units to train and, if necessary, fight with equipment comparable with that of the Active Component. This is in keeping with Defense and Congressional guidance to improve the readiness and mobilization potential of the Reserve Components. In FY 84 over $900 million dollars worth of new equipment was issued to the Guard and Reserve, and, in FY 85, we plan to issue over $1.4 billion worth. Over the next six years, the Reserve Components will receive about $12 billion worth of modernized equipment. In this connection a recent Army initiative for accelerated Reserve Component modernization includes the complete modernization of the Reserve Component tank fleet with the M1 or M60A3 tank, the upgrade of all air defense units with Roland, Chaparral, Improved HAWK, Stinger, and the modernization of all attack helicopter units with AH-1S TOW Cobra or AH-64 Apache. This recent Army initiative to accelerate Reserve Component modernization will substantially enhance the readiness of the Total Army.

Winter Training - MI Abrams

CLOSE COMBAT

M1 Abrams Tank. As of 31 December 1984, 2,353 M1 tanks have been produced. Eighteen battalions have converted to the M1 tank. Fielding of 63 M1 tanks also has been completed in a 2d Armored Divison "roundout" battalion of the North Carolina National Guard. Three additional Army National Guard "roundout" battalions will be equipped with 180 M1s in FY 85, two from Mississippi, one from Georgia. Prepositioned Materiel Configured to Unit Sets (POMCUS) fill for Continental United States M1 battalions is progressing.

M1 Abrams

Performance of the M1 in field exercises continues to be first rate. During the Reforger 84 exercise in Europe, M1 tanks from two divisions and an Armored Cavalry regiment participated. These tanks—the largest concentration of M1s ever assembled in an exercise—achieved a mission capable rate of 96 percent. As in previous exercises the Abrams proved by its superior speed, agility, and shoot-on-the-move capability, that it offers a new dimension to battlefield combat capability.

The M1 program will produce over 7,400 tanks. More than half will be M1A1s with a 120mm main gun and a nuclear, biological, chemical (NBC) overpressure system. Production will continue through FY 91 at a rate of approximately 70 per month. The M1 and M60A3 tanks, currently equipped with a 105mm gun, will receive an improved 105mm gun starting in FY 89. This program will ensure these tanks remain lethal assets on the battlefield.

The M1A1 tank is scheduled for production in August 1985. It will incorporate the German designed, U.S.-manufactured 120mm smoothbore gun, an armor modification, and a hybrid NBC system (both overpressure and ventilated face mask). The addition of the 120mm gun system will give our Active and National Guard tank fleet greater kill capability and growth capability to meet advanced threat armor.

M60A3 Tank. This tank will remain in the inventory and complement the M1 and M1A1 tank family through the end of the century. It has more lethality than the older M48A5, M60, and M60A1 series tanks. By the early 1990's, the tank mix in Active and Reserve Component units should consist of M60A3 and M1 series tanks.

120mm Tank (M1A1) Main Gun Ammunition. There are four types of 120mm munitions for the M1A1 main gun: A kinetic energy round, a chemical energy High Explosive Anti-Tank (HEAT) round, and training counterparts for each. The effect of a kinetic energy round is produced by the impact of a solid high-speed projectile. HEAT rounds produce their effect by the explosion of a shaped charge warhead upon contact with the target. These munitions are the result of a successful transfer of the cannon and munition technology of Germany's Leopard II tank as well as U.S. advances in producing a new high technology 120mm kinetic energy round, the M-829. First deliveries of all 120mm cartridges are scheduled to coincide with the first production roll off of the M1A1 tank (Aug 85). FY 86 funds will also enable us to continue development of a more effective HEAT round, the XM859. This round will provide an increase in range and warhead lethality compared to the present HEAT round.

Bradley Fighting Vehicle. If the M1 Abrams tank is to realize fully its potential as the main offensive weapon of the Army, it needs a strong battle partner. Bradley vehicles complement the Abrams in the modernized Army. They provide the Infantry and Cavalry with a high density of TOW antitank systems and the firepower of the 25mm cannon and 7.62 coaxial machinegun. Bradleys allow our mechanized forces to maneuver and fight during night as well as day and provide automatic weapons overwatching fires while on the move.

Last year, the 2d Armored Division at Fort Hood, two brigades of the 3d Infantry Division in Germany, and the 2d Battalion, 252d Armor of the North Carolina ARNG were equipped with the Bradley. Troops have been very enthusiastic about the Bradley because of its greatly increased mobility and firepower.

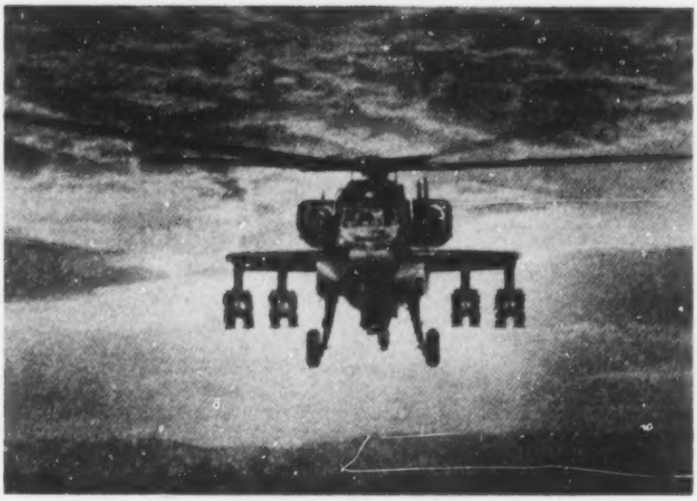
Production of the Bradley Fighting Vehicle has been proceeding smoothly, with the fourth year of production completed on time and under cost. Production will increase to almost 55 per month in FY 85. With the FY 86 budget, procurement of 716 Bradleys, a production ramp to 60 vehicles per month will be achieved by FY 87.

Bradley Fighting Vehicle

Requirements for future improvements to the Bradley—the M2/M3A2—are now being considered. The development and procurement of the the TOW 2 subsystem was supported by Congress in FY 85 and will form the core of the M2A1/M3A1 improvement program with deliveries starting in FY 86.

AH-64 Apache. The AH-64 Apache is the Army's first attack helicopter specifically developed for the day/night, adverse weather, anti-armor mission. Although the principal mission of the Apache is to destroy enemy armor—it can carry up to 16 laser guided Hellfire anti-tank missiles—it is also equipped with a 30mm chain gun and HYDRA 70 rockets that are lethal against a variety of targets. Delivery of the first lot of 11 Apaches was completed in October 1984. The first five of Lot II were delivered by the end of December. The total program provides for acquisition of 675 helicopters.

Training of pilots and maintenance personnel is underway to support fielding of the first Apache unit in 1986. Two National Guard units will be equipped with AH-64s beginning in FY 88. The FY 86 request continues the economical production rate of 12 aircraft per month.



AH-64 Apache

Hellfire. Hellfire, the primary armament on the Apache, is a third-generation anti-armor, laser-guided missile. A follow-on to the Tube Launched, Optically Tracked, Wire Command Guided (TOW) system, the Hellfire has greater lethality, greater standoff range, greater tactical versatility, and shorter time of flight. Its performance continues to exceed requirement specifications in all test firings. The first production missile firings from a production AH-64 occurred in August 1984. The FY 86 budget will procure 6,576 missiles from competing contractors, and research and development (R&D) funding will begin development of product improvements to include electro-optical counter-measure hardening of the seeker and digital autopilot for the missile.

AH-1S Cobra. Complementing the Apache in the attack helicopter fleet will be the AH-1S Cobra, which began service in 1977. The Cobra's primary weapon system, the TOW anti-armor missile, cannot be used at night without artificial illumination. The C-NITE program will give the Cobra a Forward Looking Infrared (FLIR) sensor and TOW-II guidance electronics to provide Cobra with night target engagement capability. The C-NITE program uses off-the-shelf components from the M-1 tank FLIR and the Bradley TOW-II electronics, allowing us to acquire this capability at low cost and to field it quickly. The FY 86 budget procures 107 C-NITE modification kits and continues the Cobra Fleet Life Extension (C-FLEX) program which will enable the Cobra to remain in use beyond the year 2000. The FY 86 budget will also modify 29 AH-1G's to AH-1S's for the National Guard, completing the three year conversion program.

Army Helicopter Improvement Program (AHIP). The AHIP is a program to modify OH-58A observation helicopters into first rate scout helicopters equipped with a mast-mounted sight (MMS) capable of operating in day/night and limited visibility conditions.

With its sensors mounted above its rotor system, the MMS will enhance survivability by allowing the aeroscout crew to hover behind trees and hilltops while carrying out reconnaissance or designating critical targets for laser-guided missiles such as Hellfire and Copperhead. Its target acquisition capability will also allow for adjustment of conventional artillery fire. The FY 86 budget will provide for the modification of 56 aircraft to the AHIP configuration and long lead items for 60 aircraft in FY 87. By the end of FY 86, 30 AHIPs will have been fielded. Production continues through 1991 to achieve a planned procurement objective of 578 aircraft.

TOW-2. The TOW missile system is on AH-IS Cobras, the Bradley Vehicles, Improved TOW Vehicles, the High Mobility Multipurpose Wheeled Vehicle (HMMWV), and with the dismounted infantry. This long-range (3,750 meters) system is the most powerful anti-armor weapon used by the infantry. It was first fielded in the late 1960's and has been improved to keep pace with the evolving Soviet tank threat. The latest improvement, called TOW-2, gives the weapon an even more lethal 6-inch warhead, greater speed and improved guidance. The Initial Operational Capability (IOC) date for the TOW-2 system was met in Europe in the first quarter of FY 84. It is currently being delivered to Far East units. FY 86 funds will be used to procure 20,100 TOW-2 missiles. Delivery to the National Guard will begin in FY 86. FY 86 research and development will focus on further improving the capabilities of the TOW system against the future threat by hardening the sights against electro-optic countermeasures and lasers.

Light Assault Weapon (LAW). The Army is developing an improved LAW to replace the 1958-vintage M72. The weapon consists of a free-flight rocket stored in an extendable tube that also serves as the rocket launcher. Testing is scheduled for completion in August 1985, at which time a production decision will be made. The Swedish AT-4 is also being evaluated.

SMALL ARMS

M16 Rifle. The first delivery of the M16A2 rifle is expected in the fourth quarter of FY 86. The rifle will be issued initially to the front line combat troops, with the M16A1 continuing to be the standard rifle for the remainder of the Army. The M16A2 incorporates improvements in sights, pistol grip, stock and overall combat effectiveness. Its accuracy has been improved and its maximum effective range increased from 460 to 550 meters. Before awarding the contract in FY 85, the Army plans further enhancement of the M16A2 by redesign of the upper receiver to accept optic sights and night vision devices.

9mm Handgun. The testing of candidate 9mm handguns was conducted during 1984. On 14 January, 1985, the Department of the Army announced the Beretta model M92 SB-F as the winning handgun with contract award expected in approximately 30 days. The five-year multiyear fixed price contract will be for 315,930 weapons for all services. This selection will eliminate proliferation of different handguns in the services and ensure standardization of 9mm ammunition with our NATO allies. The 9mm handgun will have greater firepower, a better safety mechanism, and double action operation.

Night Vision Devices. The Army is improving its night vision capability to permit soldiers to fight as well at night as during the day. However, this is an area in which both Active and Reserve Components are short equipment. Acquisition to fill shortfalls would pay excellent dividends in expanded combat capabilities.

Progress in thermal imagery technology has resulted in the development of common modules for use in night vision devices on the DRAGON, TOW, M1 tank, M2 Bradley, and Apache helicopter. New generation thermal technology is being developed for the individual rifle with the Short Range Thermal Sight and Thermal Weapon Sight (TWS). The TWS will also be used on crew served weapons and anti-armor missile systems.

The Army's combat developer, TRADOC, has recently recommended that each infantry squad member be equipped with a night vision device. Testing and validation of this recommendation is ongoing and total Army requirements are expected to increase. In FY 85 the Army will increase procurement of 2d generation night vision goggles for ground soldiers and initiate fielding of 3d generation aviator night vision goggles. FY 86 funds will be used to procure night vision devices and develop advanced devices for individual soldiers and for weapons systems, so our soldiers can use darkness as an advantage on the battlefield.

FIRE SUPPORT

Multiple Launch Rocket System (MLRS). Fielding of MLRS batteries continues for the third year. The system is being produced within cost, on time and without technical difficulties. A multiyear contract was awarded in September 1983 for procurement of MLRS for U.S. forces. MLRS will be co-produced by the United States, United Kingdom, Germany, France, and Italy.

MLRS provides the capability to strike deep with great accuracy and massive firepower. Each launcher can fire up to 12 13-foot rockets to ranges of over 30 kilometers. These rockets can be launched individually or ripple-fired in less than a minute.

One MLRS battery (9 launchers) of 130 men, firing one salvo (108 rockets) is capable of providing area fires equivalent to three 8-inch batteries (18 guns) of approximately 500 men firing three salvos. One 12-rocket MLRS barrage is considered sufficient to destroy a deployed enemy artillery battery. Important missions of MLRS are counterfire and suppression of air defense. It is also effective in support of maneuver units, supplementing cannon artillery fires with large volumes of fire delivered in a short time. The FY 86 budget will be used to procure rockets and self-propelled loader/launchers to support unit fieldings and POMCUS stocks.

Pershing II (P-II). P-II deployment to USAREUR continues on schedule. P-II is an evolutionary modernization of the currently fielded P-IA system. New motor stages and a terminally guided reentry vehicle (RV) give P-II more than twice the range and an improvement in accuracy. This allows low yield warheads to be used that reduce collateral damage.

P-II modernization is required for a credible NATO defense. The growing, unilateral Soviet threat to NATO, epitomized by SS-20 missile deployments, led the alliance to adopt a strategy of deploying Intermediate Range Nuclear Forces (INF) while pursuing arms control initiatives from a position of strength.

M109A2/A3 Howitzer. The last procurement of the M109A2, a self-propelled howitzer fielded in its basic configuration in the early 1960's, will be in FY 85. The M109A2 has a normal range of 18.1 kilometers. Its range with rocket assisted projectiles is 24 kilometers. The M109A3 is a depot conversion from the older M109A1 configuration and is equivalent to an M109A2.

Additional improvements to the M109A2/A3 will be made to extend the life of the system to near the year 2000. Modifications to the M109A2/A3 through the Howitzer Extended Life Program (HELP) consist of non-research and development improvements in reliability, availability, maintainability in the automotive system, and the addition of a capability for operations in an NBC environment. The NBC package allows for rapid emplacement and displacement without the need to exit the vehicle to retrieve equipment. These improvements were recently reviewed as part of an Army decision to integrate the HELP program with the follow-on Howitzer Improvement Program (HIP). The HIP will provide added range and significant improvements to the M109's armament, electronics, and communications.

Light Howitzer, L119. The new light infantry division requires direct support artillery capable of extended ranges to meet mission employment concepts beyond the capability of the existing U.S. M102. The M102 howitzer is 20 years old and has limited growth potential. The British Light Gun, L119, is a 105mm howitzer that was designed to be towed by a light vehicle similar to our High Mobility Multipurpose Wheeled Vehicle. It is designed to be compatible with existing U.S. ammunition and has the potential to fire extended range ammunition. The United Kingdom has loaned six howitzers to the U.S. Army for initial testing. If this is successful the Army will lease additional howitzers for operational suitability testing. Any decision to produce the British Light Gun will be made after test results were known.

Mortars. The Army will replace its present 81mm mortars with a British manufactured Improved 81mm mortar, M252. The M252 was type classified in July 1984. It exceeds the performance of the current 81mm mortar in range, stability, fire control and ammunition lethality. Funding for 81mm mortar procurement was delayed until a long range program for mortars was submitted addressing the requirements of all Army units, Light and Heavy, now and in the future. The Army's September 1984 mortar plan adopts the 120mm mortar as the battalion heavy mortar, the I-81mm mortar as the medium mortar, and the 60mm mortar as the company light mortar. The Army will select an off-the-shelf 120mm mortar in current production and in use in the world today. There are no plans to expend research and development funds to change the mortar. However, integral to Army requirements is a preplanned product improvement of ammunition to increase current 120mm lethality 1.5 to 2 times the lethality of our 4.2 inch mortar.

Field Artillery Ammunition Support Vehicle (FAASV). FAASV is a tracked, self-propelled armored ammunition carrier. Its IOC date is planned for Fall 1985 in the 2d Armored Division. The FAASV will replace unarmored M548 ammunition carriers. Ammunition in the FAASV is moved to the waiting howitzer by a powered conveyor belt. An armored rear door on the FAASV swings up to provide overhead protection during ammunition transfer.

Battery Computer System (BCS). The BCS is a small gunnery related computer system currently fielded at battery level. It consists of a Battery Computer Unit (BCU) at the fire direction center, and a Gun Display Unit (GDU) at each weapon. The BCU-GDU link reduces response time and provides better fire distribution on the target through the use of individual weapon firing data. It is capable of computing and controlling three fire missions concurrently. BCS will be retained by Active and Reserve Components for the Advanced Field Artillery Tactical Data System (AFATDS) - the replacement for TACFIRE. The BCS can operate with the TACFIRE system or autonomously. In FY 85 a Product Improvement Plan was negotiated to expand the BCS memory. Negotiations will be completed in the 3rd quarter of FY 85 for an early production completion in FY 87.

AQUILA Remotely Piloted Vehicle (RPV). The AQUILA is a field artillery target acquisition system. It is a small (13-foot wingspan) unmanned, remotely piloted vehicle with a stabilized daytime TV sensor combined with a laser target rangefinder/designator. It is controlled by a ground control station via a data link which transmits data to an Air Data Terminal located on the aircraft.

A Forward Looking Infrared (FLIR) mission payload to provide a night/adverse weather capability is under development. AQUILA extends the eyes of brigade and division combat elements to the range of their direct support artillery weapons.

The AQUILA RPV is under Full Scale Development (FSD) and contractor prototype qualification tests are ongoing. Of 86 test flights using FSD prototypes, 75 have been completely successful, 7 have been terminated with parachute recovery, and 4 air vehicles crashed. Modifications have been identified which have corrected deficiencies in the flight program. The Army has fielded an Early Operational Capability system (EOC) at Fort Hood. Testing with soldiers operating the system has resulted in eight successful flights out of eight attempts. The RPV program is being restructured from 70 to 79 months. This reduces program risk by removing any concurrency between developmental testing and operational testing.

Artillery Fired Atomic Projectile (AFAP). AFAPs have provided a vital part of NATO nuclear deterrence and warfighting capability for over 30 years. Both of the currently deployed 155mm nuclear projectiles (W48) and 8-inch nuclear projectiles (W33) are old and need to be retired. Modern AFAPs are required to offset recent Soviet increases in both their conventional and nuclear forces. A viable AFAP capability in NATO will influence Soviet estimates of their probabilities of successful attack and contribute to deterrence. Existence of AFAPs forces maneuver units into a dispersed posture, enhancing the effectiveness of a conventional defense. Production of the W79 modernized 8-inch projectiles has been ongoing since 1981. The Army has developed a plan to produce modernized W82 155mm and W79 8-inch projectiles in accordance with modernized AFAP quantity and cost ceilings established by the DOD Authorization Act of 1985. The ceiling in AFAP quantities is less than the original Army requirement. This reduction in the quantities of W79 and W82 warheads produced will prolong the retirement of some of the aging W33 8-inch nuclear projectiles.

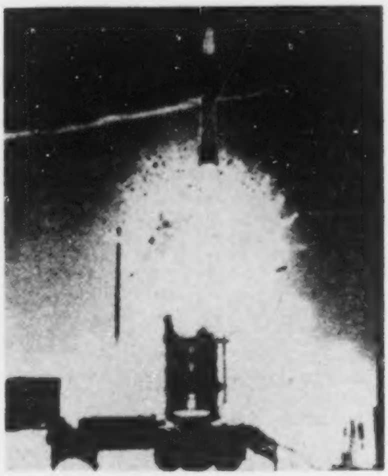
Copperhead. Copperhead, a 155mm cannon-launched guided projectile, is designed to destroy stationary or moving enemy tanks and other high value targets, with a high probability of first round kills. This is a revolutionary capability for the field artillery. The demonstrated reliability of Copperhead has risen to 84.2 percent since July of 1982. This exceeds DOD's requirement of 80 percent. The delivery rate of Copperhead has increased, and recently unit prices have come down. Future effort will center on continued cost reduction. As of 31 December 1984, 7,720 rounds have been delivered to the Army. The FY 86 budget request of $235.0 million will buy 6,900 additional rounds.

Chemical Warfare Deterrence and Binary Munitions. At a time when the chemical warfare threat is increasing around the world, in all levels of conflict, our posture for battle with enemies armed with chemical weapons remains weak. Our chemical defense readiness has been improved by providing more protection, decontamination, and monitoring equipment. Serious shortages remain. In FY 86 we will begin procurement of a new collective protection shelter and an improved mask. But even improved chemical defense does not compensate for the 30 to 50 percent loss of operating capability caused by use of the protective equipment. Our deterrent capability is not adequate and won't be until we field a modern chemical retaliatory capability. Defense alone will not deter chemical warfare.

The present stockpile has become obsolete for use on a modern battlefield and does not meet the requirements laid down by our field commanders. Moreover, it is potentially dangerous to maintain and use because of the deadly chemicals it contains. The Nation must make a commitment to ridding ourselves of this old stockpile and replacing it with one that is safer, more effective and, at the same time, smaller. Such a commitment to modernization is key to restoring meaningful chemical warfare deterrence and moving ahead in efforts to ban chemical weapons altogether. Toward this end, the Army has requested FY 86 funds to start production of the 155mm binary chemical projectile, build production base facilities in support of the Navy's BIGEYE bomb program, and prepare for destruction of the existing chemical weapons.

AIR DEFENSE

Patriot. The Army has a well thought out plan for modernizing its air defense family.



The centerpiece is Patriot. Patriot is designed to counter saturation attacks by high speed aircraft at all altitudes and in a severe Electronic Countermeasure (ECM) environment. While far more sophisticated and capable than HAWK or Nike-Hercules, Patriot requires less manpower, and is simpler to operate and maintain.

The first Patriot battalion began Follow-on Evaluation (FOE) III in July 1984, and continued through September 1984. Successful completion of the FOE III led to the decision to deploy the first Patriot battalion to Europe by January 1985.

The FY 86 Budget procures 12 fire units and 585 missiles for the United States. A total of 103 Patriot systems will be procured for the United States, 14 of which will be provided to German forces under the terms of the U.S./German Air Defense Agreement. In addition, Germany will purchase 14 Patriot Systems, while the Netherlands is to purchase 4 systems.

SGT York Division Air Defense Gun. SGT York is a 40mm twin gun with digital fire control and search/track radars mounted in an armored turret on a modified M48A5 tank chassis. It is a fast reacting highly mobile system that will protect frontline heavy division and armored cavalry assets from attack helicopters and fixed wing aircraft. The SGT York is the only short range air defense gun system specifically designed to handle this threat. The SGT York Gun was developed using an accelerated approach designed to achieve fielding in the minimum possible time at an affordable cost. The first fire unit was accepted by the Army on 13 March 1984. To date, contracts for 146 fire units have been signed. Procurement of the remaining 468 fire units will not be made until completion of FY 85 testing. This testing includes the Initial Production tests ongoing at Fort Bliss, Aberdeen

Proving Grounds (APG), and the Electronics Proving Ground (EPG); and the Follow On Evaluation I scheduled for April-May 1985 at Fort Hunter Liggett and White Sands Missile Range.

Product Improved Vulcan Air Defense (PIVADS). The product improvement of the self-propelled Vulcan was initiated in 1982 to provide the Total Army with an improved air defense capability by increasing tracking and gun pointing accuracies as well as reliability. A contract for 285 improvement kits was signed, using FY 84 dollars, in October 1984. These kits will be applied to both self-propelled and towed fire units. The Army intends to add Stinger air defense missiles to each PIVADS, creating a potent gun/missiles hybrid. Additionally, improved 20mm air defense ammunition is being actively sought. This would augment the capabilities of both Vulcan and PIVADS.

Stinger/Stinger-Passive Optical Seeker Technique (POST) and Reprogrammable Microprocessor (RMP). Stinger is a manportable, shoulder fired homing missile system. It gives company-size combat units an effective self defense capability against helicopter and fixed-wing aircraft which could do great damage to these small units. To keep Stinger effective in a countermeasure environment, an improved seeker version—Stinger-POST—was developed. It began production in 1983 and first deliveries will begin in August 1987. A Reprogrammable Microprocessor (RMP) version of Stinger-POST is needed to retain the ability to upgrade missiles as the threat evolves and to do so without having to initiate a costly retrofit program. The FY 86 budget of $304.8 million will procure 3,439 Stinger-POST missiles. The research and development request contains $18.6 million to continue Stinger-RMP development.

Improved HAWK. I-HAWK will continue in its role as the mainstay of the Army's low to medium altitude air defense. This air defense system is used to defend critical assets, such as air bases and logistical complexes, against threat aircraft in forward and rear combat areas. It stands ready for world wide deployment in the Rapid Deployment Force. The National Guard is scheduled to accept at least two HAWK battalions as part of ongoing modernization initiatives beginning in 1987. Ongoing and planned product improvements are being applied to upgrade the system performance to keep pace with the projected threat. They include improvements to increase the missile's performance in an electronic jamming environment, emission control modifications that reduce the HAWK radar's exposure to enemy antiradiation missiles, an optical tracking radar that permits an alternate mode of tracking targets in an electronic counter measures and antiradiation missile environment and a low altitude simultaneous HAWK engagement capability that permits simultaneous engagement of targets in a saturation raid.

Chaparral. Chaparral, the Army's short range air defense missile system, is effective against all types of aircraft at low altitudes and provides protection for forward deployed divisions, corps, and theater rear areas. An ongoing product improvement program will keep Chaparral, which was first fielded in 1969, an effective system through the 1990's. FY 86 dollars will be used to continue enhancing target acquisition and missile engagement capability. Initial delivery of 12 Chaparral to the National Guard occurred in 1984.

COMMAND AND CONTROL

Success in AirLand Battle is predicated upon reliable, flexible, and rapid communications for the synchronization of the various elements of combat power; intelligence, maneuver, fire support, air defense, and combat service support. Area communication systems, combat net radios, and data transmission systems are all required to provide the flow of information upon which commanders depend for the best use of their available combat power.

TRI-TAC/Mobile Subscriber Equipment (MSE). The most important communications system in the FY 86 budget request is the Mobile Subscriber Equipment (MSE). It is part of the TRI-TAC, a joint service program to develop and field automatic switched area communications equipment. To adequately support the AirLand Battle concept, the Army made a significant change in the TRI-TAC program in FY 84 when the decision was made to deploy MSE, a non-developmental item, to corps units as well as to divisions. MSE provides secure, flexible, and mobile communications needed by our field commanders. The FY 86 request of $335.3 million provides hardware to equip two complete divisions, one corps signal battalion, and the remainder of the training base.

Single Channel Ground and Airborne Radio System (SINCGARS). The SINCGARS program, providing the next generation of VHF-FM combat net radios, will be fielded beginning in FY 86. This family of radios will be lightweight, securable, capable of both voice and data transmission and possesses electronic counter-countermeasures features. The first production contract with options for a total of 44,600 radios was awarded in December 1983. The FY 86 budget request continues the production of this urgently needed combat radio.

Position Location Reporting System (PLRS)/Joint Tactical Information Distribution System (JTIDS)/Army Data Distribution System (ADDS). PLRS is a joint Army/Marine Corps development that will provide combat commanders with near-real time identification and location of friendly forces on the battlefield, regardless of terrain or weather. Initial fielding of PLRS will be in 1986 to the 9th Infantry Division. The Army is merging PLRS with the Joint Tactical Information Distribution System (JTIDS) to form the Army Data Distribution Systems (ADDS), an automatic tactical data distribution system. JTIDS will undergo joint Army-Air Force development and operational testing during FY 85/86. A production decision is expected in early 1987. Concurrently, ADDS development efforts are proceeding satisfactorily. Initial fielding of ADDS is planned for 1988. The FY 86 budget will complete the Army's multiyear PLRS contract, and will initiate ADDS procurement.

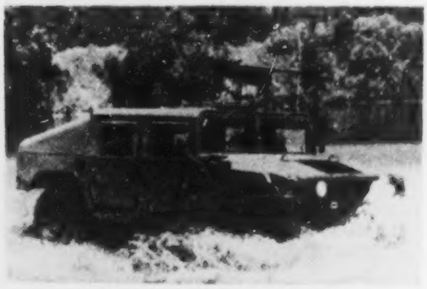
Maneuver Control System (MCS). The MCS is an automated command and control system that provides computer-assisted decision support to tactical commanders and operations personnel at corps through battalion levels. It consists of a microcomputer called the Tactical Computer Terminal (TCT) and a more powerful minicomputer called the Tactical Computer System (TCS). The three TCSs and 19 TCTs (developmental models) currently in Europe provide a much-improved capability for processing up-to-date battle information. A decision to produce MCS in 1983 included direction to initiate an integrated non-developmental item (NDI) effort to complement the full military specification MCS devices. FY 86 funding will support completion of system integration, continuation of software evolution, completion of Integrated Logistics Support documentation, and initiation of an NDI acquisition of a battalion level MCS device. Also in FY 86, the first production MCS equipment will be delivered to units in Europe and will be used in a field operational evaluation.

Remotely Monitored Battlefield Sensor System (REMBASS). REMBASS is designed to help units "see deep" by detecting and classifying personnel and vehicular activity out to a 100 kilometer range. It consists of seismic/acoustic, magnetic, and infrared sensors that are hand emplaced and remotely monitored. FY 86 procurement dollars of $22 million will buy REMBASS sets (required sensors, monitors, radio relays) to outfit three divisions and two brigades. FY 86 development funding of $2.9 million will fund to conclusion REMBASS size and weight reductions.

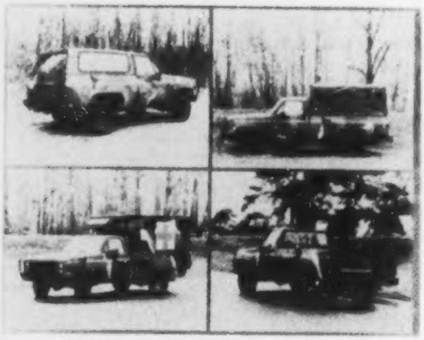
Defense Satellite Communications System (DSCS). As its share of the DSCS, the Army develops, procures, and fields satellite communications earth terminals for all the armed services. These terminals provide rapid, reliable communications to support the worldwide critical command and control requirements of military commanders and the National Command Authority. Approximately 24 ongoing contracts support R&D and procurement to field new and improved ground satellite communication terminal and supporting facilities. FY 86 funding of $217.2 million supports a wide range of new terminal fieldings as well as specific technical improvements which will enhance the survivability of this worldwide communications system.

COMBAT SUPPORT

Tactical Wheeled Vehicles. The Army's upgrade of the tactical wheeled vehicle fleet is progressing as follows:

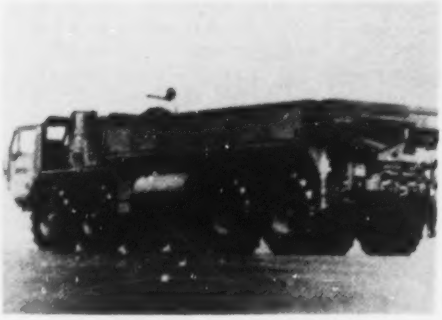


—High Mobility Multipurpose Wheeled Vehicle/Commercial Utility Cargo Vehicle (HMMWV/CUCV) vehicles are complementary light load vehicles which will replace the current fleet of M880s, GAMA GOATS, MULES, and jeeps. HMMWV underwent extensive initial production and user testing in preparation for fielding in the Active and Reserve Components in FY 85.



- CUCV fielding continues. Initial quality problems appear to be resolved under an excellent warranty program with the manufacturer. In addition to CUCV's, some M880 trucks and M151 1/4 ton trucks will be redistributed to Reserve Component units.

- The 5-ton fleet is being augmented with a product-improved version of the existing 5-ton truck. A 5-ton three-year multiyear competitive fixed-price procurement will begin in 1985 with subsequent fielding to the Active and Reserve Component. In FY 86 the Army will initiate a prototype testing program to field a new state-of-the-art family of medium tactical vehicles to be procured beginning in FY 89-90.



- The Active and Reserve Component heavy load fleet is being updated with the new 10-ton Heavy Expanded Mobility Tactical Truck (HEMTT). The HEMTT satisfactorily completed its third production test in December 1984 with substantially stronger front and rear axles and new cranes.

- The FY 85 and FY 86 budgets also support the Army's goal to field the Fast Attack Vehicle (FAV) in the 9th Infantry Division (Motorized) HTMD. FY 85 will be the first year of a three year contract.

Equipping the force with a modern tactical wheeled vehicle fleet is crucial and will continue to receive high priority emphasis within the Army. A program to refurbish some of the tactical wheeled vehicle fleet in CONUS is planned to begin in FY 85. This program will provide for repair of some Active and Reserve Component vehicles. The FY 86 program to repair 3,000 vehicles is unfunded.

UH-60 Black Hawk. The Army has fielded the Black Hawk helicopter to high priority units in CONUS, Europe and Korea. This twin-engine, single-rotor utility helicopter can carry up to 14 combat-equipped troops or an equal cargo load into high intensities of conflict, in all expected geographical environments.

Black Hawk performance has been outstanding since first being fielded in 1979. Its greatly enhanced survivability was proven in Grenada where it withstood intense anti-aircraft fire and completed its mission. The Black Hawk airframe is being procured under a second multiyear contract (FY 85-87), which has significantly stabilized the production base and produced substantial savings. FY 85 was the last year of an FY 83-85 T-700 series engine multiyear contract. This program has been so successful that the Army is requesting a follow-on FY 86-88 multiyear procurement. The FY 86 request funds the first year of that 3-year multiyear contract.

CH-47D. The CH-47D modernization program upgrades 436 of the Army's medium-lift helicopters to the "D" configuration. Improved items, which will extend the useful life of the fleet beyond the year 2000, include new fiberglass rotor blades, transmission and drive system, modularized hydraulics, electrical system, advanced flight controls, single point pressure refueling and a new auxiliary power unit. The CH-47D's initial operation capability date was met on schedule at Fort Campbell in February 1984. FY 86 continues the multiyear procurement at 48 per year.

M9, Armored Combat Earthmover (ACE) Procurement. The M9 ACE is an armored earthmoving machine designed to provide needed engineer support for forward deployed fighting forces. Its mobility (30mph) and survivability (small arms, fragmentation and operator NBC protection) enable the ACE to prepare fighting positions and create obstacles when and where they are needed on the battlefield. A 5-year multiyear procurement, planned for award in September 1984, was delayed because of reliability and performance concerns. Fix-test-fix, and follow-on engineering programs were initiated in FY 84 to correct deficiencies identified and to reevaluate reliability, performance, design and human factor considerations. Award of a multiyear procurement is planned for the first quarter, FY 86 pending successful completion of the FOE.

COMBAT SERVICE SUPPORT

Improved Individual Clothing and Equipment. A major initiative is underway to modernize organizational clothing and individual equipment (OCIE) to support the Total Army. Critical items include personnel armor system ground troop (PASGT) KEVLAR helmet and vest, combat vehicle crewman (CVC) uniform system, extended cold weather clothing system and the hot weather battledress uniform. The OCIE modernization program is fully integrated with the projected activation of the new Light Divisions. To enhance safety, the Army is funding the Active and Reserve Component fighting force clothing needs; issuing the PASGT helmet to high priority units and making the CVC uniform system mandatory for training. The KEVLAR helmet has been fielded to the 82d Airborne Division; 1st and 2nd Battalions, 75th Rangers; 7th Infantry Division; and to troops in Korea. Fielding is now underway to the 10th Mountain Division and in USAREUR. FORSCOM units and Reserve Components will begin to receive the new helmet in late FY 85. Fielding will be completed in FY 88. The new systems being introduced to the field will greatly improve our support for the individual soldier by providing state-of-the-art, weather resistant, camouflage and ballistics protection. If this program is not fully supported by Congress, the result will be a reduction in readiness, survivability, and sustainability.

Other Support Equipment. The Army is continuing to modernize combat service support equipment and fill the many shortages we have. Among last year's efforts, programs were initiated on Bulk Petroleum Distribution and Tactical Water Support systems which are critical for sustainability. Over 80 percent of the general support water units are in the Reserve Components. A program is underway to ensure that these units are equipped to perform their wartime mission. In other areas, a portion of the aging commercial construction equipment fleet was replaced in both the Active and Reserve Components. Our capability to transport and distribute materiel has been improved with the acquisition of watercraft and railcars. We are continuing to procure deployable medical equipment and maintenance equipment such as shop sets and calibration support equipment. FY 86 funds will allow the Army to continue acquisition of such support equipment as bridging; mine/countermine; petroleum and water support; and deployable medical support equipment.

Non-Tactical Vehicle (NTV) Program. The NTV fleet consists of over 71,100 commercial vehicles required to support Active and Reserve Component training, security, medical, sanitation, facilities maintenance and other essential functions at Army installations worldwide. Reduced funding from FY 77 to 81 created a backlog of replacement-eligible vehicles, of which more than 40 percent were obsolete. Beginning in FY 82 the program objective was to fund to such an extent that, by FY 88, the backlog would be eliminated while replacing each year's replacement candidates. Elimination of the total backlog will not occur until FY 91 based on the

FY 85 Budget and the current outyear program. However, significant progress has been made since FY 82 which has allowed annual reductions of the backlog by 13 percent in FY 82, 10 percent in FY 83, 10 percent in FY 84 and 9 percent in FY 85. These acquisition investments have produced lower operation and maintenance (O&MA) costs. The FY 86 program will provide for replacement of overage/overmileage and shortage NTV while continuing the reduction of the backlog. A fully supported program is required to ensure the revitalization of the fleet, lower O&MA costs, and continue transportation services necessary to support quality of life programs and general installation transportation support.

Combat Prescribed Load List/Authorized Stockage List (PLL/ASL). The Combat PLL/ASL Program was established to provide sufficient repair parts for units to accomplish wartime missions. All Active Component units and early deploying Reserve Component units will carry Combat PLLs. Combat ASLs will be carried by all Active Component direct support units and ARNG divisional and separate brigade direct support units.

Minimum Essential Equipment for Training (MEET) for the Reserve Components. The MEET program was initiated in July 1983 to fix critical equipment shortages impairing training in Guard and Reserve units. Some 600 items were identified by over 500 units. The strategy for filling these requirements was approved in December 1983. Distribution or redistribution of equipment to designated Reserve Component units is underway. Over 100 units have received items to date. This program, originally established as a one-time fix, is being institutionalized to resolve critical equipment shortages affecting Reserve Component unit training on a continuous basis.

Equipment Deliveries to the Reserve Components. In FY 83, the dollar value of equipment deliveries to Reserve Components totaled $465 million. It grew to $946 million in FY 84, a 103 percent increase in just one year. In addition to programmed distribution/redistribution in FY 84, equipment on hand in the Active Component was transferred to the Reserve Components when missions were reassigned. For example, the 2d Battalion, 12th Field Artillery recently transferred its mission and equipment to the 3d Battalion, 116th Field Artillery, Florida ARNG. Where storage space for new equipment is not available at local Army Reserve Centers depot storage facilities are being used to store some equipment until it is required for training. Over 1 million square feet of space has been identified for use by the Army Reserve and more can be made available.

Deliveries to the Reserve Components are expected to rise again in FY 85 and FY 86. Although shortages are expected to remain in air defense, communications/electronics, aircraft and medical equipment, efforts are underway to provide essential equipment for training. Equipment to repair modernized weapon systems is being programmed for Reserve Component combat service support units so they can train for their wartime missions. Equipment distribution is expected to exceed $5 billion over the next five years. Over $2.8 billion is expected to be delivered to Guard and Reserve units in FY 85 and FY 86.

RESERVE COMPONENT EQUIPMENT DISTRIBUTION (QUANTITY)
FISCAL YEAR

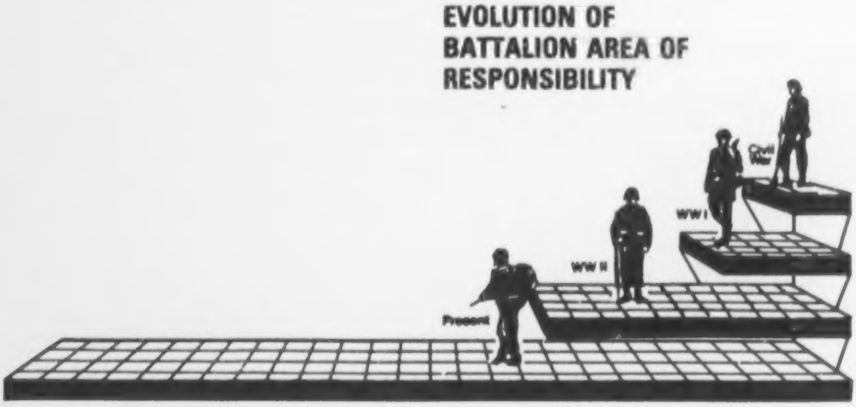
	ACTUAL		PROGRAMMED		
ITEM	83	84	85	86	87
M1 Tank	63	0	180	0	0
M60 A3	42	75	0	420	612
Bradley Fighting Vehicle	7	0	64	95	0
AH-1S	26	21	17	77	97
ITV	51	0	75	0	8
SINCGARS	0	0	0	0	276
STINGER	0	11	0	0	400*
Chaparral	0	12	36	24	36
HMMWV	0	0	1349	1021	868
Truck 5 Ton	130	198	1157	197	697
Black Hawk	6	2	6	25	30
UH-1	3	29	42	24	36

*Trainers

AH-64 Apache

TRAINING FOR THE AIRLAND BATTLE

Tomorrow's battlefields will be more lethal, intense, and complex than ever before. This increased lethality and heightened intensity result in large measure from significant technological advances in weapons and target location systems.


EVOLUTION OF BATTALION AREA OF RESPONSIBILITY

Success on tomorrow's battlefield demands a peacetime training program in which the individual soldier and the unit are trained to an edge of excellence. Training excellence provides the soldier with the requisite skills and confidence to cut through the confusion of the battlefield and accomplish the mission. The men and women of today's Army are better trained than ever before. We have warriors in our ranks just as in the past. They are prepared to win on the battlefield should deterrence fail. Readiness posture has improved as a result of realistic and timely training. Training resources are effectively managed to get the greatest value for training resource expenditure.

The momentum continues. Realism in training is receiving increased emphasis. Through use of up to date technology, the NTC provides a near-combat training experience. Range modernization initiatives provide realistic targetry for modern weapons systems. Through the use of advanced technology training simulators, individual and collective skills are greatly improved while costly ammunition is conserved. Increased emphasis has been placed on "soldierization", the conversion of civilian to service member. Training the trainer, physical fitness and overall readiness are under constant scrutiny to ensure vigorous standards are met. These challenges have been evaluated at all levels. The quality of training, superb leadership, and intense conditioning to meet tough and demanding standards support the Army Goal to mobilize, deploy, fight and win anywhere in the world.

FIELD EXERCISES

The Army Exercise Program. The Army exercise program involves CONUS and overseas deployment of equipment and troops in varied environments from Europe to Southwest Asia, the Pacific, and Central America. Planning flexibility permits broad use of forces for many contingencies. In FY 86 the Army will participate in 15 JCS-directed and 37 JCS-coordinated exercises. The scope of these exercises is determined by the objective outline in the JCS Exercise Planning Guidance and provides an opportunity to practice combined arms techniques, to promote cooperation with other services, and valuable interoperability training with our allies. Accomplishment of assigned objectives during joint/combined exercises ensures that Army forces are fully capable of executing assigned missions. Participation of Reserve Component units in Army exercises has greatly increased during the last several years and every major exercise, including those outside of the Continental United States (OCONUS), currently includes significant Reserve Component participation. Major exercises scheduled for FY 86 are:

— REFORGER 86. The Army will deploy approximately 17,000 CONUS-based forces to Europe and conduct a field training exercise (FTX) with theater forces. REFORGER demonstrates rapid reinforcement of NATO and U.S. war fighting capabilities, improves NATO interoperability and exercises general defense/contingency plans. A National Guard brigade task force will ship selected equipment and draw POMCUS as part of REFORGER 86. Combat support and combat service support units deploying for REFORGER 86 will consist primarily of Army Reserve units.

— TEAM SPIRIT 86. The purpose of this exercise, which is the largest in the free world, is to increase the combat readiness of the Republic of Korea and U.S. forces through training in joint/combined operations to include strategic and tactical movement, reception, employment and redeployment of out-of-country U.S. augmentation. In addition to 25th Infantry Division participation, the 7th Infantry Division (Light) will provide a brigade task force of approximately 1,700 personnel, demonstrating the rapid strategic deployability and operational capabilities of our light forces. Combat and combat service support will consist primarily of Reserve Component units.

— GALLANT EAGLE 86. This is a large scale Central Command (CENTCOM)-sponsored FTX to be conducted in CONUS. The purpose of GALLANT EAGLE 86 is to exercise HQ CENTCOM and component elements in the planning and execution of joint military operations in a semi-desert environment.

— AHUAS TARA IV and GRANADERO 86. These are joint/combined exercises in the Central American region sponsored by Southern Command (SOUTHCOM) that include a series of combined counterinsurgency exercises to continue U.S. presence in the region, reassure friendly Caribbean nations and deter aggression in the region.

The National Training Center. The NTC gives units the most rigorous combined arms training experience possible short of actual war, using live fire training and opposing forces in realistic scenarios. In FY 84, 24 battalions including 1 Army National Guard battalion, trained at the NTC; 28 battalions including 5 National Guard battalions, will train in FY 85. The NTC is providing unit commanders with an objective assessment of their unit's training status. Leader training is enhanced in the high stress NTC environment. Data collected at the NTC is providing input to improve training, tactical doctrine and systems employment throughout the Army. Specific feedback to units is improving follow-on home station training. Lessons learned are promulgated throughout the Army to improve training and readiness.

The Army Range Modernization Program. The Army Range Modernization Program is a successful effort to manage design, planning, programming and construction of marksmanship and gunnery facilities across the Army. The object of the program is to meet the training needs generated by force modernization and to upgrade existing facilities which suffer from over a decade of underfunding. An Army National Guard 5-Year Master Range Plan has been developed to interface with the Army's Master Range Plan. The Department of Army Ammunition Ranges and Targets Agency has been key to planning and execution. It gives field assistance to major command and installation trainers in design, site adaptation and integration of state-of-the-art technology. New ranges will be fully automated with modern target arrays which realistically portray threat formations and meet training task conditions. The Multi-Purpose Range Complex (MPRC) will support gunnery requirements from crew/squad through company for the Abrams Tank and Bradley Fighting Vehicle as well as attack helicopter gunnery for the AH-64. Two standard facilities which will support training for Military Operations on Urbanized Terrain (MOUT) training from individual soldier through company team levels also have been created. Construction of MPRC ranges began in FY 84 at Forts Bliss, Riley, Hood and two major training areas in Germany.

The first jointly prioritized Army Master Range Plan programmed over $100 million for construction of FY 85 ranges and targetry. The Remote Target System was type classified and the technical data package transferred to the Army. Targetry required for out years will be purchased based on competitive bid award and contractor performance. Range construction has begun at Forts Bragg, Dix, Irwin, Jackson, Knox, Leonard Wood, McClellan, Ord, Sill, Stewart, and the Military Academy. The Army will obligate funds in FY 85 to demonstrate the first Multiple Object Location System. The first system will be installed on the Fort Hood MPRC and will automatically manipulate target exposures based on firing vehicle locations, surface danger fans and programmed scenario.

Under the FY 86 Budget, fielding of standard ranges and targetry will continue. Six additional MOUT facilities will be constructed. Construction costs are estimated at $144 million as well as an additional $54 million for more efficient, state-of-the-art targetry. This will complete the USAREUR Major Training Area range upgrade program. This will also largely complete the Army's institutional training center range upgrade. The FY 86 program will be the biggest, most complex effort to date.

LIGHT INFANTRY DIVISION TRAINING ENHANCEMENTS

To produce the best light infantry divisions in the world, the Army has developed a unique training strategy. It will produce better trained soldiers, more capable leaders, and highly trained light infantry battalions prepared to deploy on short notice to anywhere in the world to fight in the full spectrum of conflict. This training strategy involves increasing the enrollment in Ranger School, expanded one station unit training for light infantry, the development of light leaders and light fighters courses, and special initiatives to reduce training distractors by minimizing the requirement for soldiers to perform base operations housekeeping tasks. These initiatives are being implemented for the 7th Infantry Division at Fort Ord.

RESERVE COMPONENT TRAINING

Initiatives are underway to improve training of the Reserve Components to prepare units better to execute their wartime mission. To enhance Reserve Component field training, the Army has developed a program to provide the Multiple Integrated Laser Engagement System (MILES) tactical engagement simulation equipment for the Reserve Components at their normal maneuver sites. This program identified a requirement for the purchase of MILES for 30 training sites during FY 84-85.

The Key Personnel Upgrade Program develops key personnel within ARNG units by direct association with a counterpart Active Component officer or noncommissioned officer (NCO) during tactical training exercises. The Army Reserve Individual Ready Reserve Management Plan focuses on training key individuals possessing priority skills in a multi-year training program to fill early deploying units on mobilization.

The CAPSTONE program aligns Reserve Component units with their wartime chain of command and provides a training priority for wartime planning. The initial alignments were developed for Europe. CAPSTONE alignments have been expanded to include the Pacific, Southwest Asia, and the CONUS sustaining force. CAPSTONE training associations include Roundout and Affiliation. Affiliation is a dedicated training and assistance relationship between an Active Component sponsor and Selected Reserve Component unit. Roundout is a similar relationship with the additional fact of a wartime alignment under which the Reserve Component unit will deploy with its sponsor unit.

The Overseas Deployment Training (ODT) Program provides high priority Reserve Component units the opportunity to train in their contingency areas with their wartime command. Selected units train up to 26 days in JCS exercises working alongside their Active Component counterparts. The mutual respect developed between the Active and Reserve Component units becomes stronger with each training year and makes the idea of the Total Army a reality. The ODT Program has increased from 26 units/cells in 1976, the first year of the program, to over 1,200 units/cells approved for FY 85. Over 1,000 units/cells will participate in FY 86, including an ARNG infantry brigade scheduled to participate in REFORGER 86. A large contingent of Army Reserve combat support and combat service support including an entire 1,000 bed medical hospital will also participate. In addition an Army Reserve Area Support Group will have command and control of all units and equipment entering Europe through the Benelux area. The FY 86 Budget will support the current level of Reserve Component participation in ODT as long as JCS exercise funds are provided. It is anticipated that participation will continue to increase at a rate of 10 percent annually.

Eighty-five percent of the Army's nondivisional maintenance companies are in the Reserve Component. The inability to provide training on modern equipment is a major problem in the training of Reserve Component maintenance personnel. A centralized facility, manned and equipped to provide hands-on training and instruction on force modernization equipment, has been proposed to address this training shortfall. The Army has established a Regional Maintenance Training Site Program to improve the readiness of Reserve Component maintenance personnel through military occupational specialty, transition, and sustainment training programs.

Early 1984 marked the start of a unique SOUTHCOM exercise called Minuteman I. This exercise was a JCS-approved, SOUTHCOM-Republic of Panama sponsored, combined task force engineer training exercise conducted on the western coast of the Azuero Peninsula, Republic of Panama. The exercise objective was to provide realistic, environmentally unconstrained engineer training, tropical medicine training, and logistics-over-the-shore (LOTS) training not available during stateside Annual Training. From 11 March to 5 May 1984, a total of 750 soldiers from the Puerto Rico, Louisiana, and the Florida ARNG, the 193d Infantry Brigade (Panama), and the Panama Defense Force joined forces to construct a 15 kilometer road between Llando de Mariato and Cerro Melena and to survey an additional 27 kilometers of road between Cerro Melena and Arenas. Planning is currently underway to construct the additional 27 kilometers of road between Cerro Melena and Arenas. Other Reserve Component support for SOUTHCOM has come from the Army Reserve. An Army Reserve Civil Affairs Brigade Headquarters has conducted area studies and civil affairs seminars, written programs of instruction for the School of Americas, and participated in CAPSTONE planning in coordination with SOUTHCOM.

The families, employers, and American public must understand that the Reserve Components carry a major portion of the defense of this nation. Increased Reserve Component participation in NTC rotations, JCS Exercises, and ODT serve as examples of expanded training required of many units. At times, Reserve Component personnel find it necessary to train beyond the normal two week annual training period and 48 training assemblies per year. As a result, the potential exists to strain family and employer relationships. Acknowledgement of the moral support of families and economic support of employers during these extended training periods must, therefore, be made. The role of the Reserve Components in the defense of this nation is increasing and the continued support and understanding of families and employers toward the citizen-soldier is vital to the success of that effort.

INDIVIDUAL TRAINING

One of the essential elements of readiness is the technical and tactical proficiency of those who command and lead. The need for formal leadership training must be balanced against the cost measured in terms of absence of the leader from the field. A number of initiatives are underway to improve the expertise of the NCO and officer corps through training, reducing where possible the cost to the Army in weeks in the school house.

School of Advanced Military Studies (SAMS). This program at the Command and General Staff College was initiated in 1983. Its purpose is to provide selected officers with a broad, deep education in the science and art of war at the tactical and operational levels. The program supplements the CGSO course in terms of theoretical depth and practical application. A course size of 48 has been approved for 1985-86. Volunteers who are selected to participate in the program must demonstrate a high degree of potential for serving as battalion and brigade commanders and as principal staff officers at division and corps.

Combined Arms and Services Staff School. Currently, the Army is sending 1,200 captains each year to the Combined Arms and Services School (CAS^3). The nine-week staff training course is considered one of the more demanding and challenging officer training schools in the Army. Our goal is to train all OPMD captains, approximately 4,500 per year. However, due to leadership requirements for light infantry divisions, other key initiatives, and fixed end strength, the Army anticipates training only 2,400 captains in FY 86. Decisions will be made later concerning the optimum number to be trained in the future.

Revised Officer Advanced Course (OAC). The Chief of Staff has approved a revised OAC of 20 weeks with up to 6 weeks of follow-on modules selected to meet student needs. The purpose is to strengthen professional knowledge by capitalizing on a student's prior experience and addressing the needs of future assignments.

Implementation will begin in January 1985. The additional modules at the end of OAC will be available for intensive schooling based on an officer's next assignment. Best estimates are that the new course length will average 23 weeks per student; a savings of three weeks from the current OAC.

Warrant Officer Training System. The Chief of Staff has approved a revised Warrant Officer Training System. It provides for three levels of training to prepare warrant officers to perform their duties. First, all warrant officer candidates are now required to complete a three step appointment process which includes: 1) selection by a centralized Department of the Army selection board; 2) completion of a six week, four day Warrant Officer Entry Course; 3) technical certification by the proponent branch. Upon successful completion of all three steps the member will receive appointment as a Warrant officer. The second level of training is attendance at an advanced course by all warrant officers. The third level is the attendance at a senior course by a selected number of warrant officers. Both the warrant officer advanced and senior course are under review to determine the proper course length. The Chief of Staff has approved a study group to review the entire Warrant Officer Professional Development Program.

Expansion of the Sergeants Major Academy. The NCO Corps provides both the first line leaders and the trainers of Army soldiers. Due to facility constraints at the Sergeants Major Academy, the Army is unable to provide formal training for all the senior NCOs at the 1st Sergeant and Sergeant Major level. Upon completion of approved construction at the Sergeants Major Academy in FY 87, the number of 1st Sergeants trained annually in CONUS will increase from the current 696 to a projected 1,010. The Sergeants Major Course will expand from 496 to 624. A new Senior Operations/Intelligence NCO course, training 500 students, will be established. These initiatives will enhance Army readiness by substantially improving the skills of senior NCOs.

Non-Commissioned Officer Training. The Army's Primary Technical Courses (PTC) and Basic Technical Courses (BTC) are designed to provide training in critical technical tasks for mid-level combat support and combat service support NCO to meet force modernization requirements. Beginning in FY 85, selection of the best qualified available NCO for attendance at PTC and BTC will be centrally managed by the Military Personnel Center. Travel and temporary duty costs will be funded from the Department of the Army Open Allotment. The intent is to ensure full use is made of the training seats available and that the combat support/combat service support NCO is properly trained for career progression.

Reserve Component Professional Military Education. ARNG Active Guard/Reserve personnel are now required to attend Active Component schools in order to fulfill their Professional Military Education and career development requirements. By doing so, Army Guard full-time military personnel will receive training equivalent to their Active Component counterparts. ARNG military technicians are encouraged to attend Active Component Professional Military Education courses. They are required to attend proponency courses applicable to their technician jobs, taught at the National Guard's Professional Education Center.

Reserve Component Specialized Training. In 1984, the ARNG established two specialized training courses, a Battle Skills Course and a Tank Commanders Course. The Battle Skills Course teaches technical and tactical employment aspects of squad and platoon weapons and is based on current tactics and doctrine for small unit combat and survival on the battlefield. This course is available to all E5 through E9 NCOs. The Tank Commanders Course prepares ARNG NCOs, assigned as tank commanders, to teach basic skills to their crews.

Physical Fitness Program. In line with the 1981 DOD Directive on Physical Fitness and Weight Control, and in fulfillment of initiatives begun in 1982, The Army Year of Physical Fitness, the Army is tightening its physical fitness standards. Studies indicate soldiers are performing significantly better than in the past, especially in aerobic fitness. Twenty-eight members of the Army Family were competitors in the 1984 Summer Olympic Games, seventeen men and women from the Active Component, a member of the Corps of Cadets, a family member, and nine members of the Reserve Components. Nine were medal winners.

A number of collateral actions also have been completed. The Army successfully coordinated the first Military Symposium as a part of the 1984 U.S. Olympic Scientific Congress and shared its progress with the other services and civilian fitness experts. The Army Family Fitness Manual, the first of its kind in the country, has been published and distributed. Several hundred "Master Fitness Trainers" have graduated from the Army fitness school and are conducting programs in their units. The Army Fitness School and Research Institute has completed a significant study of infantry soldier physical requirements. Army fitness experts are involved in steering nutrition efforts, and the Army is extending its over-40 medical screening effort to Reserve Component soldiers. The Secretary of the Army continues to chair quarterly fitness meetings with general officers in the fitness community.

The FY 86 Budget will allow continued research and training in physical fitness initiatives. Fitness programs for specific combat requirements will be developed. Master Fitness Trainer courses will be extended to the Reserve Components. Major nutrition initiatives will be developed, and emphasis on total fitness for the entire Army family will be continued.

TRAINING AMMUNITION

The Standards in Training Commission (STRAC) established standards for training and prescribed the quantities and types of ammunition, by weapon system, needed to attain and sustain an appropriate level of weapon proficiency. STRAC considered 38 weapon systems from the M1 tank to the M16 rifle. It listed those skills or tasks an individual, crew or section must attain and sustain to be considered combat ready in weapons gunnery proficiency. The STRAC system emphasizes maximum use of training aids, devices and simulators. The resulting training strategy tells the unit how to reach gunnery combat readiness.

Training readiness levels were determined based on the time a unit has for training after mobilization. Units with lower readiness levels have reduced training performance standards and require fewer peacetime resources. Although it is desirable to maintain all units at the highest readiness level, available and anticipated resources will not support this objective.

Full STRAC implementation will occur in FY 86. STRAC training strategy models are dynamic. They will change with availability and fielding of the emerging and more mature family of devices and simulators. The use of STRAC strategies will provide the Army with valid rationalization for training ammunition requirements, and improve the means by which training ammunition related dollars are justified. Full caliber ammunition cost avoidances by use of devices and simulators were applied to the FY 86 ammunition budget. The result was a realignment of dollars to make up critical shortfalls in other ammunition line items. This will provide increased training and readiness.

THE ARMY CORE TRAINING DEVELOPMENT (TD) PROGRAM

The Army Core Training Development program is an effort focused on producing cost-effective, performance-oriented training programs and materials. The Army has led the world in state-of-the-art approaches to training development and has evolved training development into a sophisticated process characterized by analysis of requirements, development of performance standards, use of state-of-the-art media and methods, and evaluation of students, materials, and program success. Reorganization of school training development structures has reemphasized the primacy of the instructor in training and doctrinal development. Work underway will produce performance standards for training development programs and refinements of staffing standards, to include production standards for interactive video disc courseware.

Computer Based Training System and Video Disc Technology. The Army has moved vigorously to make computer-based training systems available to train critical high-risk tasks, simulate expensive equipment, and drill on labor-intensive tasks suitable to computer-controlled delivery. TRADOC is the executive agent for an interagency group of users of computer-based instructional systems. TRADOC is placing mainframe computers in selected sites and purchasing 1,000 terminals to be linked by a phone-line network. The Training and Doctrine Command computer-based instructional system is in the process of growing to five regional mainframes joining 1,215 terminals, in a nationwide instructional network.

The Army plans to exploit an interactive video-disc-based electronic information delivery system (EIDS) for training. EIDS will provide the Army with the capability to provide high-fidelity video simulations and interactive training. FY 86 funds will allow the purchase of 820 EIDS for use in Army schools. Courseware is in development for this instructional system.

Training Devices and Simulators. The unprecedented integration of modern weapons systems into the force structure and increased constraints on people, dollars, time, ammunition, and training areas adversely affects the training environment. This year's budget reflects the Army's continued commitment to exploit the capabilities of training devices and simulators to provide realistic training with the potential to achieve long term economies by: funding efforts to simulate indirect fire; expanding MILES use to more types of weapon systems and more units; continuing production of the Conduct of Fire Trainer and Flight Simulators; and funding efforts to substitute training devices and simulators for the live fire. Fielding MILES for ground, aircraft, and air defense direct fire weapon systems provides unparalleled opportunity for realistic, two-sided, tactical training worldwide. True combined arms tactical engagement training is being sought through efforts to incorporate the simulation of field artillery indirect fire, mines, and nuclear and chemical area weapon effects into MILES exercises.

To maximize the training value and utilization of training devices and simulators being distributed to the Army National Guard, construction funds are programmed in FY 86 to establish an ARNG Regional Training Center at Fort Dix. This prototype facility is designed to provide a multi-purpose unit training location using high technology training devices to train combat, combat support, and combat service support personnel and units. It is scheduled to be operational during FY 87.

The major thrust in the development of new training devices is to develop equipment that allows a high transfer of knowledge and experience for the training situation to a combat situation.

National Training Center

MANNING THE TOTAL ARMY

Above all else, in peace and in war, people are the Army. The Army's proud story is told by the unselfish deeds of its men and women. Today, we challenge each soldier and Army civilian to set personal goals which lead to excellence, and to pursue them with leadership, initiative, drive, and perseverance. The result: marginal performers become good, the good become better, and the better become excellent. Truly we give soldiers the opportunity and challenge to "be all you can be" in today's Army.

The strength of the Army depends on the quality of our soldiers and on how well we lead them. We have worked hard to recruit our very best citizens and to provide the professional environment that would convince the best to stay in the Army. The recruiting and retention statistics and the professional performance of our small units whether fighting in Grenada, training friends in Honduras, or participating in large field exercises with our major allies, attest to our considerable success. Last year the quality of soldiers coming into the Army was better than ever. In turn, these gains in first-term quality allowed us to offer reenlistment to the most competent, professional soldiers with demonstrated leadership potential.

The New Manning System, with its COHORT (Cohesion, Operational, Readiness and Training) units and regimental structure seeks to improve stability and cohesion in units. We have implemented a plan to improve family life and to focus on better facilities. We have strengthened our campaign against alcohol and drug abusers. All these efforts support our belief that nothing is more important to the Army than its soldiers.

Without constant attention to the factors that determine success in maintaining a hardhitting Army, we will lose our momentum. It is critical that we regain a compensation package that is competitive with those found in the civilian sector. We must have a flexible set of special incentives to help us attract and retain exceptionally qualified soldiers with particular skills. Finally, we cannot slacken those programs which improve the soldier's living and working environment. Old unattractive, open bay barracks, congested office space, and drafty maintenance areas discourage professionals from continuing to serve.

RECRUITING AND RETENTION

Quality Accessions. The Army seeks to recruit the greatest possible number of high quality accessions using the criteria of graduation from high school and high test scores on the Armed Services Vocational Aptitude Battery (ASVAB). While education is not the only consideration in building a competent force, a high school diploma is an excellent measure of an individual's ability to complete initial entry training (IET). Those who successfully complete high school tend to complete their enlistment as well. High scoring young men and women grasp more quickly and retain sophisticated training. Soldiers of this caliber tend to show a spirit of cooperation, respond well to good leadership, and promote good order and discipline. These traits, along with their increased ability to operate, maintain and repair new equipment, directly increase the readiness of the force and provide the high quality base from which the future NCO leadership will be drawn.

FY 83 was one of the best recruiting years in history. The Army met its aggregate objectives and improved the number and proportion of new recruits who were high school graduates or scored average or above on the enlistment test. The Active Component enlisted 88 percent high school graduates, and only 12 percent Test Category IV's. Both the Army Reserve and National Guard achieved similar results.

FY 84 results indicated continued success. High school graduates enlisting in the Active Component increased to 90.8 percent. Test Category I-IIIA's represented 63.4 percent of all non-prior service (NPS) enlistments and Test Category IV's fell to 10.1 percent. The Army's College Fund and Bonus Program, as well as the two-year enlistment option, contributed to the qualitative improvements over the last three years as did an increase in the quality and quantity of major media advertising and pay/reenlistment benefits. High unemployment was a significant factor during FY 80-83, and to a lesser extent, FY 84. Changes in these or other manning factors could influence our ability to man the force in the future.

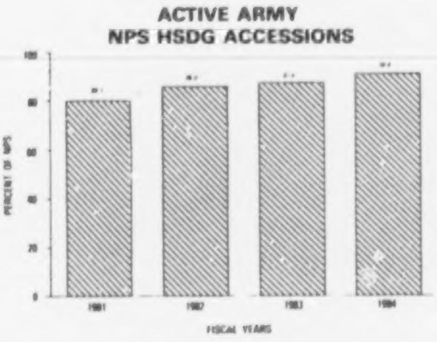


Figure 2.3

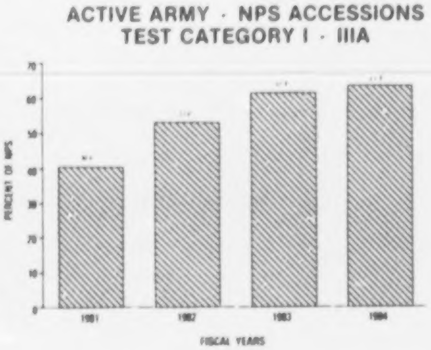


Figure 2.4

Educational Incentives (Army College Fund). In order to remain competitive with the other services in the quality recruiting market, the Army uses enhanced educational incentives. With a declining pool of potential accessions, the Army must have incentives that attract, distribute and align quality young people to form the core from which future enlisted leaders will be drawn. The Army College Fund and the Loan Repayment Program fulfill these needs. The Veterans' Educational Assistance Program (VEAP) is available to all personnel who enlisted or entered active duty after 31 December 1976. Under this program the Army matches 2:1 individual contributions up to $2,700. In 1979, the Army began testing "kickers" to high school diploma graduate, Test Category I-IIIA, enlistees in certain designated skills. Initially these kickers were $2,000, $3,000 and $4,000 for two, three and four year enlistments respectively. In FY 81, the Army participated in the DOD Educational Assistance Test in which several options were tested. In FY 82, the Army adopted one of these options, ULTRAVEAP (Army College Fund) nationwide, and offered VEAP kickers of $8,000 for a two year enlistment and $12,000 for a three or four year enlistment. For FY 85, the Army added two additional enhanced Army college fund kickers, $18,300 for a four year enlistee and a $12,900 kicker for two year enlistees who have completed their two year college programs. These new offerings together with the remaining educational incentives will help the Army achieve its quality and total accession goals.

A new Veterans Educational Assistance Program (new GI Bill) has been enacted by Congress with an effective date of 1 July 1985. The Army will offer kickers in addition to the basic benefit in order to maintain adequate momentum in the recruiting marketplace.

Enlistment Bonuses. Enlistment cash bonuses have been used in past years as an incentive for enlistment. In recent years, the Army has found that enlistment bonuses are most effective as a distribution tool. Bonuses are used to target high quality accessions to shortage, hard to fill, and hard to train skills, principally in the combat arms. By prudent management of the bonus program, the Army has improved the distribution of quality enlistees and has been able to meet quality objectives. Bonuses of varying amounts from $2,000 to $8,000 will continue to be offered to assist in meeting overall manpower goals.

Reserve Components. The Army's Reserve Components' goal is to man Reserve and National Guard units with trained personnel at 90 percent of their wartime levels by FY 89. This is an ambitious undertaking.

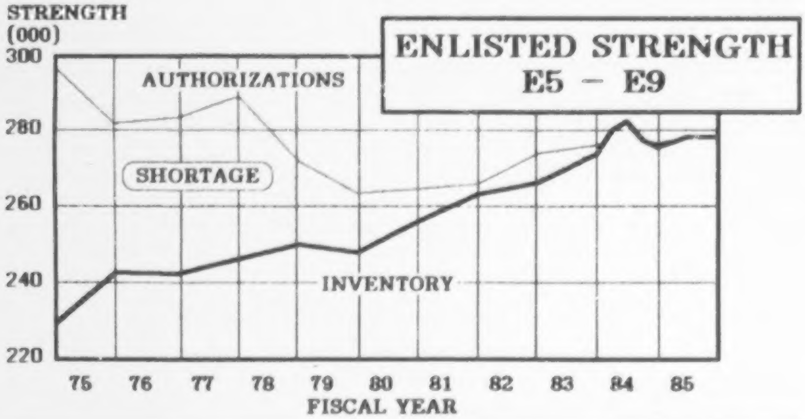
Army National Guard strength has increased each year since FY 79. Improvements in the quality of the force have also been realized. The impact of the declining manpower pool and improving economy and employment rates were felt in ARNG recruiting throughout FY 84. Following significant recruiting gains during the 4th quarter, the ARNG reached an end strength of 434,259, 100.2 percent of its objective. Quality standards of FY 84 accessions have exceeded objectives with a high school graduate rate of 69 percent and a Test Category IV of 7 percent, well below the 12 percent ceiling established by the ARNG. The objective for FY 85 is to attain a paid strength of 438,400 with growth to 450,500 in FY 86. Six hundred and one ARNG recruiting personnel are being added to the recruiting force in FY 85 with an additional 225 requested in FY 86. Efforts to improve retention include an increase of 67 Active Guard Reserve personnel dedicated to increased retention of trained personnel who are completing their required term of service.

The Army Reserve increased Selected Reserve end strength by 8,874 members in FY 84. There were 255,393 personnel in paid strength at the end of FY 84. The quality of Army Reserve non-prior service accessions continues to improve with 81.8 percent of enlistments high school graduates. Additionally, over 50 percent were in Test Category I-IIIA. 11.8 percent of FY 84 enlistments were from personnel scoring in Test Category IV. U.S. Army Recruiting Command and Army Reserve In-Service Recruiters accomplished 100.5 percent of their combined missions with 69,496 Army Reserve accessions in FY 84. An increase of 650 Army Reserve recruiting personnel in FY 85 will support Army Reserve manpower growth programs through FY 90, while continuing to improve the quality of new accessions.

The Reserve Component Education Assistance Program has been particularly successful in recruiting Guard and Reserve soldiers interested in a college education. Nearly 11,300 enlisted under this program which awards up to $4,000 in educational assistance in exchange for a 6-year service commitment.

More than 28 states offered low-cost educational loans and other educational benefits to attract recruits for the ARNG. Only Hawaii offered similar benefits to the U.S. Army Reserve. Many states also provide tax-free Guard income, unemployment benefits, and free license plates to Guard personnel. The new Educational Assistance Act of 1984 will have a positive impact upon the Reserve Components. Under it an individual can enlist, reenlist, or extend for six years, or be appointed as an officer in the Reserve Components and agree to serve six years to gain 36 months of educational assistance up to $5,040. Congress has extended authorization of the Student Loan Repayment Program until 30 September 1986. All other bonus programs expire on 30 September 1985 and require legislation to extend them. As with the Active Components, an adequate compensation and entitlements package is the key to continued strength improvements.

Reenlistment. During FY 84, the active component was successful in meeting its reenlistment objectives, while reducing many skill imbalances. Continued congressional funding support, especially in the Selective Reenlistment Bonus program, will be invaluable in enhancing readiness through retention. Figure 2.5 depicts our progress in resolving NCO retention problems.



STATUS	FY81	FY82	FY83	FY84	%FILL
COMBAT ARMS	−6260	−2144	−2075	+1208	101.7
EW & INTELLIGENCE	−2078	−1440	−1053	−1279	90.2
OTHER OVERSTRENGTH	+6877	+3749	+4970	+2143	101.6
OTHER SHORTAGE	−1189	−7907	−4143	−3058	94.3
TOTAL	−2650	−7742	−2301	− 986	99.6

Figure 2.5

The Army expected to lose mid-career and senior noncommissioned officers as the 1989 termination date of the Vietnam era GI Bill approached. This should not happen now, as the All-Volunteer Force Educational Assistance Program automatically enrolls the Vietnam soldier who is still on active duty in mid-1988, and provides him the basic benefits of the new program ($300 per month for 36 months) plus half of what his monthly benefits would have been under the Vietnam era GI Bill. The soldier is not forced to leave the service before 1989 in order to use his benefits. Alternate educational incentives involving the new GI Bill must be implemented to ensure that post-service programs do not become a disincentive to retention.

Retention of high quality soldiers will depend on stronger reenlistment efforts, an adequate reenlistment bonus program, increased in-service educational and self-improvement opportunities, and other key factors comprising a competitive total compensation package. FY 84 reenlistment results for the Active and Reserve Components are highlighted in Figure 2.6.

1984 REENLISTMENTS
ACTIVE COMPONENT

	OBJECTIVE	ACTUAL	PERCENT
FIRST TERM	28,436	29,137	102.5
MID TERM	24,967	24,292	97.3
CAREER	23,421	23,207	99.1
TOTAL	76,824	76,636	99.8
RESERVE COMPONENT			
FIRST TERM			
USAR	6,751	6,110	90.5
ARNG	11,252	10,462	93.0
CAREER			
USAR	19,430	22,294	114.7
ARNG	61,813	50,075	81.0
	99,246	88,941	89.6

Figure 2.6

Women in the Army. The number of women in the Army has increased substantially in the last two decades. Since FY 70, the female strength has grown from 4,200 officers and 8,300 enlisted soldiers to about 10,200 officers and 66,700 enlisted soldiers. Reserve Component figures show the same trend. In the Army Reserve women comprise over 16 percent of the force. Officer strength is 6,950. Enlisted strength is 37,700. Over five percent of the ARNG force was composed of women at the end of FY 84. Officer strength was 2,070 with enlisted strength at 20,470.

Our objective for women soldiers is to provide them with the maximum opportunity to succeed. Toward that end, our policy has been brought in line with Navy and Air Force statutes which exclude women from serving on combatant ships and planes. To define where women should serve on the battlefield, the Army conducted a study in FY 83 leading to the development of a system which identified the risk of direct combat for every position in the Army. This system is called the Direct Combat Probability Coding Policy. It excludes women from jobs which involve direct combat. Enlisted women may serve in 86 percent of all specialties, that is in 302 of 358 military occupational specialties. Within this framework, Army policy is to provide women the greatest possible number of meaningful career opportunities. Toward that goal, we project steady and healthy end strength growth to approximately 13,100 officers and 69,300 female enlisted soldiers by the end of FY 89.

ARMY NATIONAL GUARD
FEMALE PROJECTIONS

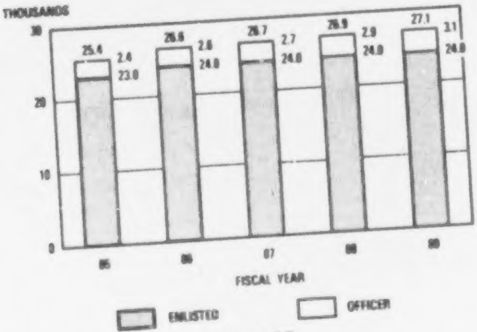


Figure 2.7

ARMY RESERVE
FEMALE PROJECTIONS

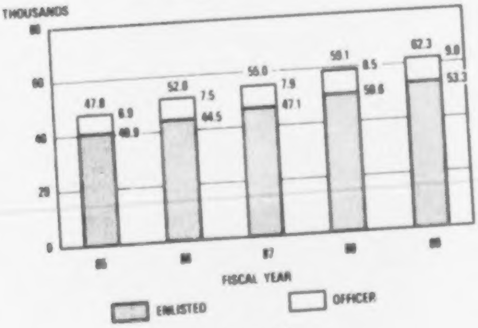


Figure 2.8

ACTIVE ARMY
FEMALE PROJECTIONS
(AS OF OCTOBER 1984)

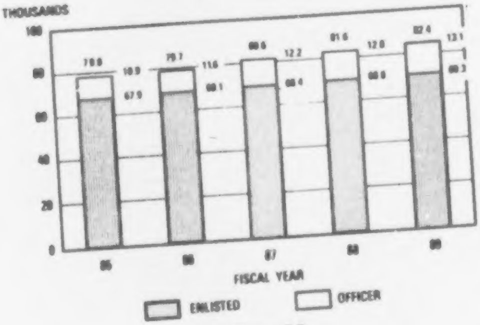


Figure 2.9

Minority Representation in the Total Force. Over one-third of today's Army is made up of soldiers who identify themselves as members of a racial or ethnic minority. This represents a slight decrease over time, but indicates a trend toward bringing the composition of the Army more in line with that of the general U.S. population. The Army recognizes that a vital element of readiness rests in soldiers' confidence in their peers, their leaders, and the basic fairness of the institution to which they belong. The Army Equal Opportunity Program addresses this vital component of Army readiness by clearly identifying equal opportunity as a leadership responsibility and a key part of successful mission accomplishment. Recent surveys indicate that an increasing majority of soldiers, including minority members, express a positive attitude toward equal opportunity and particularly the state of equal opportunity within their units.

COMPENSATION ISSUES

Permanent Change of Station Initiatives. Service members continue to absorb significant out-of-pocket expenses incident to permanent change of station (PCS). Studies show that the monetary allowance in lieu of transportation paid service members during PCS is insufficient to cover their transportation expenses.

Service members currently absorb temporary lodging expenses when quarters are released prior to departure from the old duty station and again while awaiting assignment of quarters at the new duty station. Congress authorized reimbursement for a portion of these costs in the Uniform Services Pay Act of 1981 but funds have never been appropriated for program implementation. DOD did not program funds for FY 85. They did request that Appropriations Committees allow use of available funds for this purpose if such funds materialized within available resources. Congress rejected this plan.

Service members absorb travel and transportation expenses when traveling to the new duty station to locate quarters in advance of PCS (when on-post quarters are not projected to be available at the new installation). Should the member be a home owner, he or she frequently experiences huge financial losses associated with buying and selling a residence when tour lengths are insufficient for equity growth to cover expenses. Legislative initiatives are scheduled for development in FY 87-88 which will address reimbursement for a portion of these out-of-pocket expenses.

Military Retirement. We fully understand the growing cost to our nation of the military retirement system and agree with a careful review of options for it. At the same time, we emphasize that the retirement system is but one element of a total compensation package. We believe the critical test for proposed changes in the compensation package is the force shaping and combat readiness effect it has on the Total Army.

There has been increasing concern among both Active and Reserve Component soldiers that critics of the current system are comparing military retirement to an old age pension, which it is not. The results of such invidious comparisons are proposals for piecemeal changes to retirement without regard to the total package context. Moreover, these proposals create the impression that the government and the Army are unreliable employers because of unilateral changes to the "employment contracts." Through active duty pay caps and annual adjustments that fail to keep pace with private sector wage growth, retired pay is suppressed. Coupled with proposed changes to the retirement system, these caps and adjustments can constitute a serious reduction of retirement benefits which would impact on our ability to maintain the requisite force.

Because of soldier concerns, we continue to oppose piecemeal changes to the military retirement system, and support in-depth analysis of the type conducted by the Fifth Quadrennial Review of Military Compensation. This landmark effort established an analytical point of departure for thorough evaluation of the military retirement system. Although it did not specifically assess the impact of retirement system changes on the Reserve Components, a critical link in the posture of Army readiness, we continue to review the results of these findings. The Army can ill-afford an incorrect conclusion. Any damage to the career force, either active or reserve, could have a devastating effect. The penalty of lost defense capability is too severe.

PERSONNEL READINESS

Combat units at the proper strength, soldiers qualified in the right skills, and the correct distribution of experience and leadership are vital to the readiness of the Army.

The leadership and support of Congress in providing adequate recruiting and reenlistment funds has fostered substantial progress in filling the hollow Army of the late 70's. This has been particularly true for the Reserve Components. In October 1980, only 77 percent of the 1,100 Army National Guard units were at their authorized strength levels (See Figure 2.10). This situation improved steadily and by October 1984, 91 percent were at authorized levels. The total number of Guard units had increased by 85. The Reserve has made similar progress. In October 1980, only 56 percent of Army Reserve units met their authorized strength levels (See Figure 2.11). This increased to 80 percent by October 1984. Between April 1982 and April 1983 the number of Army Reserve units grew by 42.

PERSONNEL READINESS
ARMY NATIONAL GUARD

(PERCENTAGE OF UNITS MEETING AUTHORIZED STRENGTH LEVEL)

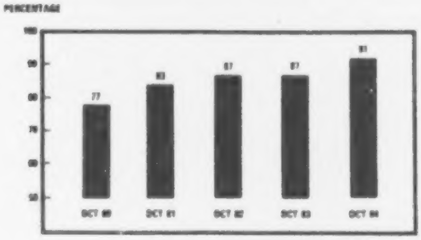


Figure 2.10

PERSONNEL READINESS
ARMY RESERVE

(PERCENTAGE OF UNITS MEETING AUTHORIZED STRENGTH LEVEL)

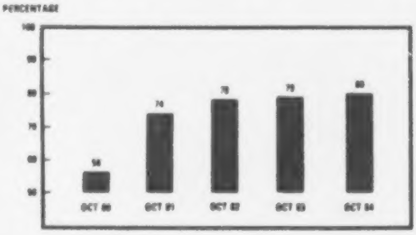


Figure 2.11

The result for both the Active and Reserve Components has been a reduction in units rated not combat ready due to personnel factors. For major combat units - divisions, brigades, and armored cavalry regiments - 46 percent were combat ready for personnel reasons in October 1980 (see figure 2.12). By October 1983, that number had increased to 75 percent and remains at about that level.

PERSONNEL READINESS
ALL MAJOR COMBAT UNITS

AC AND RC

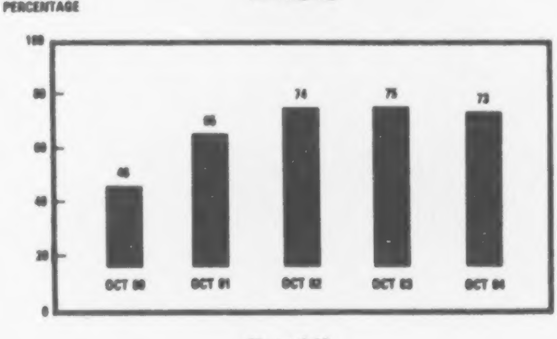


Figure 2.12

STABILITY AND COHESION

The Army is implementing a New Manning System to improve combat effectiveness by reducing turbulence and enhancing cohesion, esprit, and loyalty in Army units. The New Manning System, which currently affects armor, infantry and cannon field artillery units, has two subsystems: The COHORT Unit Movement System and the U.S. Army Regimental System.

COHORT. COHORT is a program designed to increase stability in combat arms units. The program establishes a three-year life cycle for companies and batteries. First term soldiers are recruited for a specific COHORT unit and undergo initial entry training as a group. Then they are assigned to a combat unit in the United States where they join their officer and NCO leaders. After initial duty in CONUS, most COHORT units deploy overseas on an established schedule. The stable unit environment allows leaders to establish a greater sense of cohesion, belonging, and unit pride.

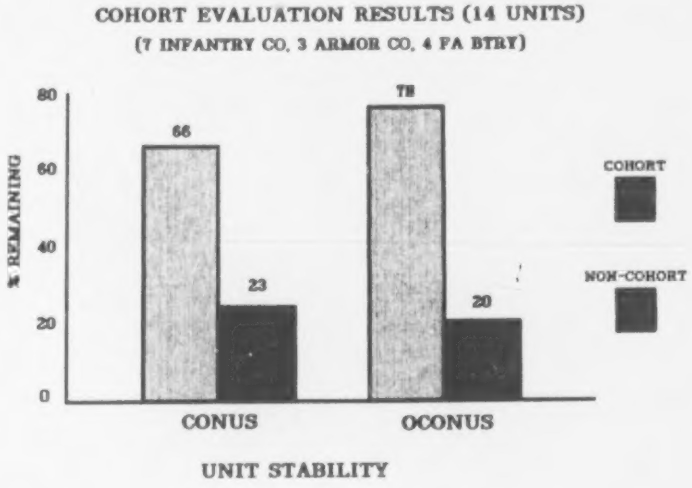


Figure 2.13

During FY 84, 24 additional COHORT units were formed, which brought the total to 76. Nineteen COHORT units have deployed overseas (11 to Europe, 7 to Korea, and 1 to Alaska) during FY 84. Implementation is currently proceeding at a deliberate pace. While the number of participating units is too small to have a significant impact on Army-wide turbulence now, the lessons learned from the evaluation of the first fourteen COHORT companies provide insights into the expected benefits of the program.

The COHORT program will continue to evolve in FY 85. Four battalions in CONUS will rotate with four like battalions in Europe as a pilot evaluation of the battalion rotation program. In addition, new battalions activated in the force during FY 85 will be formed as COHORT battalions.

U.S. Army Regimental System. The Combat Arms regimental system allows soldiers to belong to a single regiment throughout their careers, to further the development of a greater sense of loyalty, esprit, and belonging, for both the soldier and his family. Regiments consist of a group of similar CONUS and OCONUS battalions under a single regimental designation. Troop assignments of officer and enlisted members will be limited to units sharing the same regimental designation. These groupings are for management purposes only and do not affect current division-brigade tactical structure.

On October 5, 1982, the Army approved the formation of 64 combat arms regiments. Fifteen of these regiments were constituted by the end of FY 84.

Full-Time Support of the Reserve Components. To assist the part-time soldiers of the Reserve Components achieve and maintain the unprecedented level of readiness that is now expected of them, we have increased the number of Active Guard/Reserve (AGR) and military technicians (MT) who serve in Full-Time Support positions. These personnel serve at all levels and help train and administer the Reserve Components. Constrained growth in the Full-Time Support Program would impede the efforts of the Army to modernize and to improve the fighting capability of its Reserve Component units.

FULL-TIME SUPPORT STRENGTH

(Active Guard/Reserve and Military Technicians)

	FY 83	FY 84	FY 85	FY 86
ARNG				
AGR	13,757	16,656	20,583	30,679
MT	22,742	24,589	24,119	24,128
USAR				
AGR	7,033	8,822	10,700	14,714
MT	6,603	6,973	7,585	7,606
TOTAL	50,135	57,040	62,987	77,127

Figure 2.14

DISCIPLINE OF THE FORCE

The Army's success in recruiting and retaining only the most capable men and women is reflected in the improved discipline of the force. Active Component key indicators of indiscipline continue a downward trend. Since FY 74, all four major categories, violent crime, crimes involving property, AWOL, and desertion, have declined steadily. In addition to the accession of highly motivated, quality soldiers, this success results from the concern with discipline shared by commanders at all levels of Army leadership, and a vigorous Army crime prevention program.

With the continued accession of high quality personnel and the maintenance of a healthy command climate that supports discipline, these favorable trends should continue.

EFFECTS OF QUALITY
INDISCIPLINE RATES PER 1,000

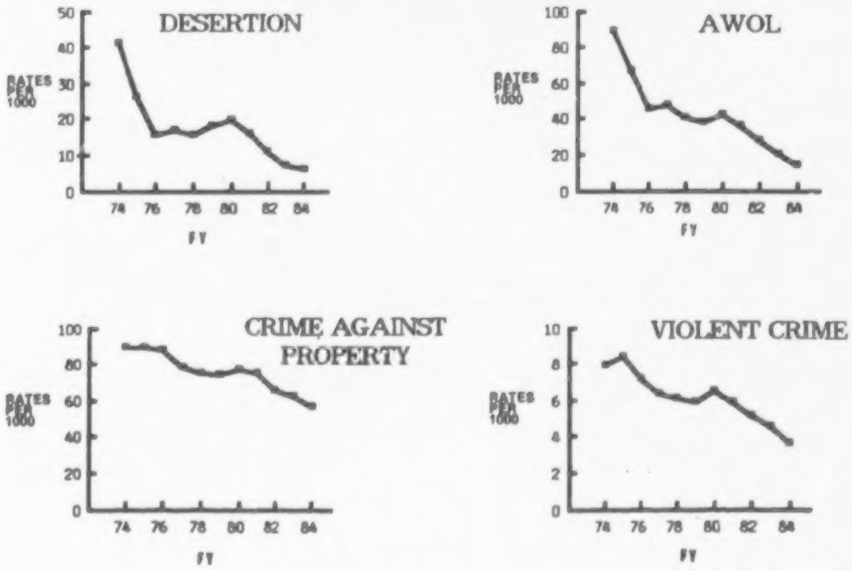


Figure 2.15

CIVILIAN WORK FORCE

The civilian work force, providing much of the Army's sustainment base, is an inseparable part of the Total Army. We are working to increase productivity and absorb many new requirements by tapping existing resources through such means as organizational efficiency reviews, sick leave conservation programs, and better selection and development programs for current and future managers. With civilian employees performing key support functions like equipment maintenance, procurement, supply, research, and financial management, the Army faces the challenges of recruiting, retaining and motivating an increasingly professional work force and ~~of~~ ensuring that civilian support measures are adequate.

Civilian Position Management. The Army supports the Administration's commitment to attain the most efficient civilian manpower resource mix through an improved position management program. Though external reviews have recognized the Army as a "front-runner" in position management and found its position management program to be effective, we continue to emphasize to all levels of command the need for more effective position management in structuring civilian positions. In addition, we are stressing the need for improved job classification accuracy. We are also requiring concerted and coordinated management efforts in efficiency reviews of commercial and noncommercial activities to attain economies and the most efficient organizational and position structure. While we anticipate that mission requirements from our defense build-up will result in some additional growth in our high grade work force, the foregoing efforts will ensure such growth is mission essential and kept to a minimum.

Civilian Training, Education and Development System. The Army's ability to maintain its readiness posture requires a skilled civilian work force. The Army has established a new, systematic approach to improve development of the civilian work force. Based on specific competencies identified in professional and administrative occupations, the system will provide for minimum essential training in professional and managerial skills at key career stages. Funding for job analysis studies and new training and development requirements to meet future mission assignments is included in the Army's budget.

Civilian Substitution Program. The Army has used both civilian substitution and civilianization programs as means of replacing military personnel with civilians. Civilian substitution and civilianization are completely different. The Army prefers and supports civilian substitution, which retains military end strength while increasing readiness through the conversion of appropriate military Table of Distribution and Allowance (TDA) infrastructure positions to civilian and the assignment of released military manpower to other high priority force structure needs. Civilianization reduces military end strength by a corresponding civilian increase through the direct conversion of military positions. While both programs increase civilian end strength, only civilian substitution retains the military end strength.

The Army has a civilian substitution program which was developed initially at the request of OSD. In FY 83 and FY 84, 2,967 military positions were converted to civilian. In FY 85 an additional 1,707 military positions will be converted. An additional 526 military positions will be converted in FY 86 for a total of 5,200 in this program. A total of 8,200 military positions are programmed to be converted to civilian through FY 90. The released military manpower has been programmed to provide for critical requirements associated with high priority modernization and readiness programs. The civilian substitution program has provided one means by which the Army is able to improve its force structure without increasing the active military end strength. If the Civilian Substitution Program is not supported, the Army will require additional military authorizations to continue high priority programs.

MANNING THE TOTAL ARMY

Strength Levels Since the end of the draft 11 years ago, Congress has supported the Active Component end strength at about 780,000. Active Component strength on 30 September 1984 was 780,180 and we expect to meet the authorized strength of 780,800 in FY 85. The FY 86 budget request is for an Active Army end strength of 780,800. End strength figures for the Total Army are shown in Table 2.16.

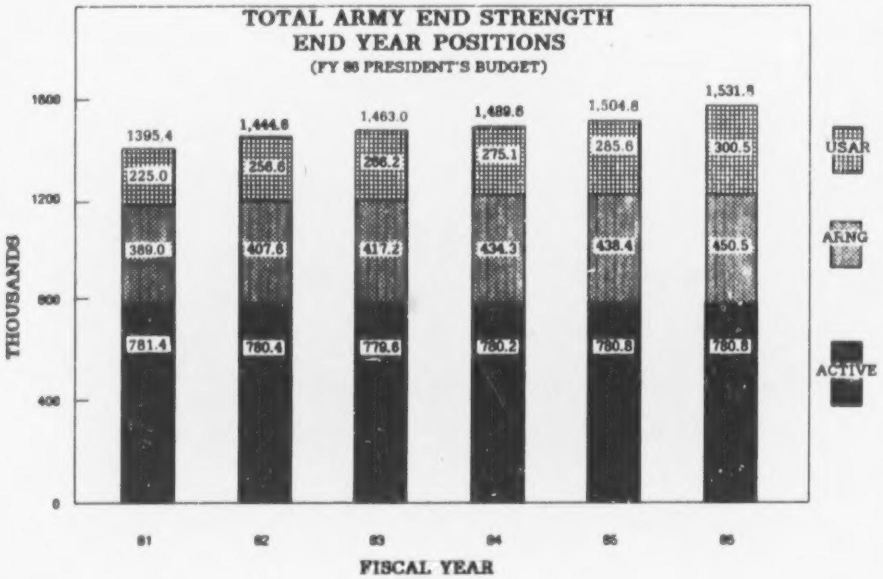


Figure 2.16

Ranger Training

MOBILIZING AND DEPLOYING THE ARMY

If Landpower is to be successful in postponing the choice between the nuclear option or retreat, the Army must be able to mobilize rapidly and move units and materiel rapidly to the theater of operations. The Army still has significant concerns about the ability to respond in a timely fashion. Nonetheless, improvements are being made in the Army's ability to meet emergencies of all kinds.

War reserve stocks, though not what we would like, are being built up in Korea and Europe. Actions are being taken to improve our position with regard to the availability of trained military manpower on mobilization. Although much has been done, the adequacy of strategic lift capability remains our number one deployability concern. Light infantry initiatives and prepositioned equipment in Europe will mitigate but will not correct this most serious shortcoming. Even with increased emphasis on POMCUS, the Army is still short two division sets of equipment in Europe. Progress has been made, but much remains to be done. A solution will require the best efforts of all of us.

MOBILIZATION ISSUES

Individual Ready Reserve (IRR). The IRR constitutes the largest of the Pretrained Individual Manpower categories. These personnel provide the majority of fillers required to bring both the Active Component and selected Reserve units up to the wartime required personnel strength. The U.S. Army Reserve Personnel Center (ARPERCEN), a field operating agency of the Office, Chief of Army Reserve, provides centralized personnel and training management for the IRR. The IRR peaked at a strength of 1,059,064 in FY 72. Following the end of the draft, the IRR was gradually reduced to a low of 149,427 in FY 77. Strength as of September 1984 is 276,651.

The Army supports the IRR. Legislative initiatives in 1983 resulted in an increase in the Military Service Obligation from six to eight years. This will provide a significant growth in the IRR beginning in FY 90. Another initiative resulted in the 1 June 1984 implementation of an IRR Reenlistment Bonus which provides $750 for soldiers reenlisting for three years in a specified critical skill. A comprehensive IRR refresher training program is under development to improve the mobilization readiness of selected soldiers. This program will be implemented by the end of FY 88. Dollar constraints have limited active duty training tours to less than 20 percent of the IRR population annually.

Should IRR training and retention initiatives not be fully supported by Congress, the personnel reporting to units for duty during wartime will not be able to assist in the war effort without extensive retraining.

Army Retiree Recall Program. The Army's Retiree Recall Program was developed to reduce the shortfall of pretrained individual manpower that would occur upon mobilization. Program goals are: to provide mobilization manpower; to release Active Component individuals for reassignment or deployment as retirees become job-proficient; and to provide CONUS base sustainment during the early days of mobilization. The program was implemented in August 1981 and the first "hip pocket" mobilization orders were issued in November 1981. Currently 131,000 retirees have been preassigned to CONUS installations. USAREUR has 2,300 preassigned retirees and Korea 185. The Army plans to expand the recall program by increasing the number of positions suitable for fill by retirees. The program is currently being refined to make it more responsive to the needs of the Army and retirees upon mobilization. If this program is not fully supported it would increase the pretrained individual manpower shortfall by 131,000 and fail to capitalize on a low cost, highly motivated source of pretrained manpower.

Individual Mobilization Augmentation (IMA) Program. The IMA Program assigns members of the Army Reserve to Active Component MTOE/MTDA positions which are authorized for fill only in wartime. These positions exist not only in the Active Army structure but also outside the Army in agencies such as Office of the Joint Chiefs of Staff and the Office of the Secretary of Defense. The IMAs are important because they provide augmentation during periods of emergency with personnel who are already familiar with their organizational assignment and trained for their position.

This program had its genesis in the Mobilization Designee program which began in 1948. The IMA achieved its present character in 1981 when the participants were reassigned from the IRR to the Selected Reserve and became available under Presidential Call-up authority, Section 673b, 10 U.S. Code. ARPERCEN manages the IMA Program to include personnel assignments, budget, issuance of training orders and maintenance of IMA position files.

The Army supports this program because the IMA Program provides the best trained of the Pretrained Individual Manpower. The program is shifting from an officer heavy program to one in which there is an equal distribution between officer and enlisted members. It is expanding from a current strength of 11,000 to a strength of 27,000 in FY 91.

If this program is not funded, the Army will lose a valuable pool of fully trained soldiers capable of augmenting units and headquarters during periods of crisis. Without the IMA there will be no augmentation capability until mobilization is ordered. Then, soldiers assigned to augmentation positions will be unfamiliar with the organizations' operations and procedures.

Retention of Emergency-Essential Civilian Employees. Emergency-essential Army civilians who support critical systems overseas are vital to mobilization plans during crisis or war conditions. Today, these civilians—approximately 2,200 worldwide—are expected to remain at their posts on a voluntary basis, having signed agreements to remain on the job as a condition of employment. Further measures are necessary, however, to compensate them for their support and to serve as an incentive to remain on duty under hazardous conditions.

In recognition of this necessity, the Army has developed a legislative proposal regarding incentive pay, additional insurance, and other benefits for emergency-essential personnel. A final proposal is expected to go to Congress as part of the 1985 DOD legislative program.

Mobilization Equipment Redistribution System (MOBERS). MOBERS is an automated redistribution module of the Logistics Data Network. MOBERS will provide the Army with the capability for central planning and redistribution of equipment to units requiring it in a crisis situation. The plan will be executed by mobilization stations. The planning will consider all Army assets and the current operations scenario. Testing of a prototype was conducted during Mobilization Exercise-85. Delivery of the MOBERS system from the contractor is scheduled for April 1985. Plans call for its use in planning redistribution during Mobilization Exercise-86.

Army National Guard Readiness Initiatives. Increasing reliance has been placed upon the readiness of the ARNG through the addition of early deployment missions. The initial Roundout mission was given to the ARNG in FY 80. ARNG units have been added to the Rapid Deployment Force every year since 1981. POMCUS missions were given to ARNG units upon initiation of the program by Department of the Army. Three National Guard brigades have high priority theater defense missions. Fifty percent of Army Reserve Component Special Forces units exist within the ARNG. Units with critical missions receive a correspondingly high priority for the distribution of mission essential resources.

Mobilization exercises are designed to evaluate, to correct deficiencies, and to improve the mobilization preparedness of ARNG units. The mobilization exercise program which was funded for the first time in FY 81 has grown from approximately $2 million to $9.5 million in FY 84. Concurrently, participation by ARNG units and headquarters in mobilization exercises has increased from 30 units in FY 81 to over 450 units in FY 84. In FY 84, the State Area Commands began training for their primary post mobilization mission which is to provide support to mobilized ARNG units. The primary training vehicle was the National Guard mobilization exercise program. FY 85 will begin the fifth year of a five year program to cycle each of the early deploying (D to D+60) ARNG units through a mobilization exercise. In FY 86, over 550 exercises will be conducted beginning a new five-year cycle for D to D+60 units.

The significant increase in the number of ARNG units identified to support CENTCOM and/or which are being considered for early deployment missions requires innovative approaches to mobilization preparedness. States are combining Annual Training and Overseas Deployment Training with mobilization exercises.

Some states are conducting no notice mobilization exercises including movement to mobilization stations which test a unit's preparedness in a realistic environment.

Two critical areas which effect National Guard unit readiness are equipment on hand and military occupational specialty qualification. In FY 84, the National Guard increased significantly the number of supported D to D+60 high priority missioned units. However, because of the changes in MTOEs, units are entering a non-combat ready status until new equipment is received and personnel become qualified in new specialties. The National Guard Bureau (NGB) has established State Readiness Committees, the Army National Guard Readiness Council, and the Army National Guard Force Readiness Committee as forums to address readiness problems at the state level, the Army Area, and at national level. The NGB is implementing the Department of the Army Instant Unreadiness Policy which will permit adjustment of E-dates and will designate certain equipment items as non-reportable until such items are available. The ARNG will continue to implement the Readiness From Redistribution of Army Materiel Program which transfers materiel from lower priority, later deploying units to higher priority units; to negotiate early conditional releases of equipment to ARNG units where possible and/or practical; and to use congressionally dedicated procurement funds to fill equipment shortages for high priority, early deploying units.

Army Reserve Readiness Initiatives. The Army continues to allocate new and modernized systems to the Army Reserve. These include the Blackhawk helicopter, M60A3 tank, and the commercial utility cargo vehicle. As a result, the capabilities of the Reserve will be enhanced significantly. The rapid pace of modernization initiatives and resulting requirements for facilities and training present the Army Reserve with a formidable challenge, especially with regard to the readiness posture of affected troop units. To meet this challenge, the Army Reserve is placing heavy emphasis on skill qualification of soldiers, on maintenance of newly acquired, modernized equipment, and on realistic training exercises.

Two of the three Army Reserve Infantry Brigades now have higher priority standing for equipment fill based upon their wartime missions. These brigades are Theater Defense Brigades. There are other Army Reserve early deploying units which are also in an enhanced position for equipment fill.

The Army Reserve plans to expand troop unit participation in mobilization field exercises beginning in FY 87. The mobilization exercises will involve unit alert, assembly, processing, uploading and movement of Reserve units from home station to mobilization station. They will provide for realistic evaluation of actual mobilization readiness. This is a long term mobilization project which will be expanded over the outyears to include most deploying units of the Army Reserve.

DEPLOYMENT

Strategic Mobility. The ability to meet time sensitive force and sustaining supply delivery requirements is critical to the Army's global deployment mission. We remain vitally concerned about the adequacy of airlift and sealift resources and continue to support fully the Air Force and Navy in their efforts to improve total strategic mobility capability. Improvements in both of these areas have been and are continuing to be made. We have formalized our joint commitments to work together to define the requirements and to identify the programs which will most efficiently meet those requirements. These commitments are embodied in Memoranda of Agreement we have entered into with the Air Force and the Navy. Despite these coordinated efforts, progress in resolving strategic lift capability shortfalls is slow, and the solutions are expensive. Our efforts are further complicated by the continuing decline in the capability of the civil sector, primarily the U.S. Merchant Marine, to support our wartime needs.

Adequate strategic airlift is most critical in the earliest days of a war or crisis. Figure 2.17 illustrates projected strategic airlift program capabilities through FY 90, expressed in millions of ton miles per day (MTM/D).

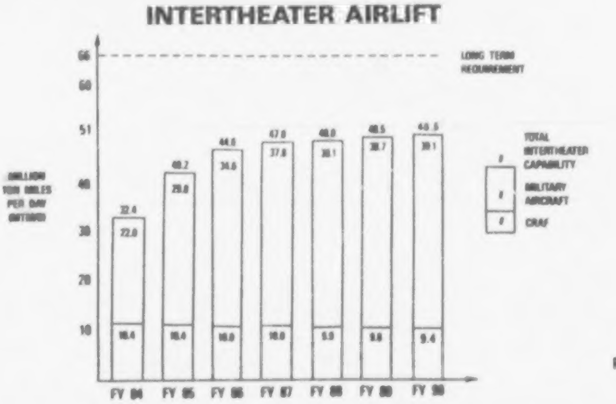
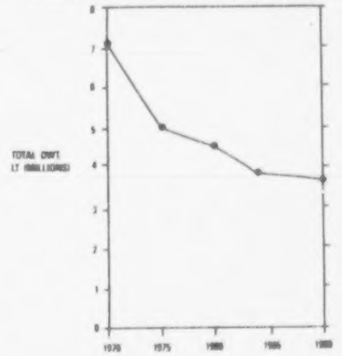


Figure 2.17

The FY 90 program will result in approximately 49 MTM/D of capability against a recognized long term requirement of 66 MTM/D. The resulting shortfall of approximately 17 MTM/D will be reduced significantly by fielding the C-17 Airlifter which is scheduled for initial operating capability in FY 92. The Army supports the C-17 program. In addition to reducing the overall strategic airlift shortfall, this versatile aircraft will provide essential outsize airlift capability, reduce the intratheater airlift shortfall, provide a needed replacement for the C-141, and augmentation for the C-130 fleet. In the near term, airlift capability is being improved by rewinging the C-5A fleet, acquisition of 50 C-5Bs and 44 additional KC-10s, improvements in wartime aircraft utilization rates, extensions of the service life of existing aircraft, and limited enhancement of the capabilities of the Civil Reserve Air Fleet.

Strategic sealift is critical to the deployment of Army Forces and sustaining resupply. The continuing decline of the Merchant Marine fleet, and the industry trend toward containerization and away from more militarily useful breakbulk shipping, requires an innovative new look at the scope and direction of strategic sealift programs. Figure 2.18 portrays the decline in militarily useful general cargo ships in the U.S. Merchant Marine from 1970 to 1990. The importance of an active program to respond to this decline cannot be overstated. The Navy, with our support, is meeting this challenge through a combination of programmed increases to the U.S. Ready Reserve Force and enhancement programs to allow containerships to be modified to support unit equipment movement requirements.



TRENDS IN ACTIVE U.S. - FLAG MERCHANT SHIPS, 1970-1990:

TOTAL DEADWEIGHT OF MILITARILY USEFUL GENERAL CARGO SHIPS 1/

1/ EXCLUDES MSC CONTROLLED FLEET

Figure 2.18

Figure 2.19 illustrates the impact these programs will have on total unit equipment surge shipping capability by 1988 and 1990.

AVAILABLE UNIT EQUIPMENT CAPABLE SURGE SHIPPING

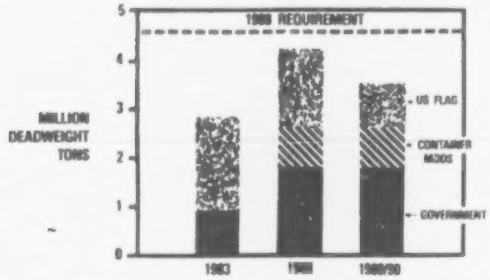


Figure 2.19

Two significant points must be noted. First, we are still unable to meet the total surge requirement; and second, unless the decline of the U.S. Merchant Fleet is halted or reversed, or new ideas are developed, our capability again will begin to decline beyond 1988. We are working with the Navy to identify the most effective program solution.

Specific Army programs are also intended to have a positive effect on reducing overall mobility requirements. Most important in this category is the light division initiative. The light divisions are designed to be air deployable in fewer than one-third the number of C141-equivalent sorties and in one-third the time. Their rapid deployability and high combat to support ratio characteristics may well preclude the later necessity for a larger, more costly force. We are also aware of the need to ensure transportability is addressed as a critical factor in new equipment design. Modernized equipment, no matter how capable, is useless unless it can be efficiently transported to the theater and enhance battlefield mobility.

The Army's land and sea based prepositioning programs serve to reduce the total lift requirement by reducing the overall demand, as well as the distance to be traveled from the prepositioning site to the area of operations. For example, Army readiness is being improved by the prepositioning in late FY 85 of Combat Service Support (CSS) equipment aboard a Heavy Lift Prepositioning Ship. Prepositioning CSS equipment afloat in Southwest Asia was identified in the DOD Sealift Study as the best means for reducing early strategic lift requirements. The 8,000 tons of equipment loaded on the ship will be required to unload early arriving equipment and supplies aboard the Near Term Prepositioning Force and fast sealift deployed from

CONUS in support of CENTCOM contingencies. The CSS equipment will provide the LOTS capability necessary to unload material in areas where port facilities are not capable of meeting projected requirements. Most of the equipment on the Heavy Lift Prepositioning ship is difficult to deploy and could not be deployed by surface in time to meet force closure requirements.

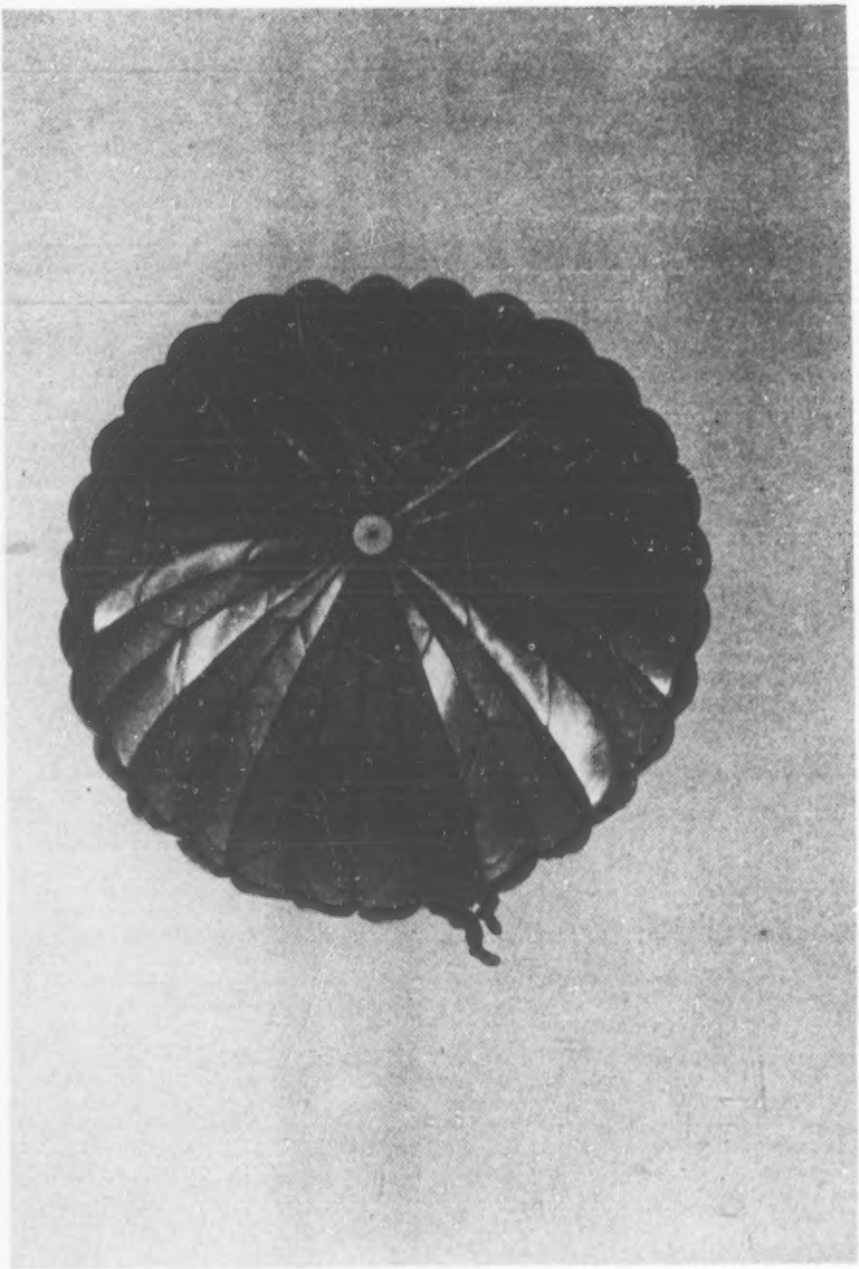
Finally, working under the auspices of an Army-Navy Memorandum of Agreement, programs to balance Navy strategic sealift and Army-Navy offload/discharge systems are well underway. Navy fielding of fast logistics ships, the auxiliary crane ship, the heavy lift prepositioning ship and the expansion of the Ready Reserve Force have all contributed to reducing strategic sealift shortfalls. The Army has programmed simultaneously to match the Navy's delivery profile and satisfy the minimum LOTS requirement. Programs include modernization and upgrade of the Army's watercraft fleet and the joint acquisition with Navy of causeway systems designed to make watercraft more useful in those areas of the world where shallow beach gradients would limit LOTS operations. Joint efforts such as this provide better systems, produce more capability per dollar expended and result in defensible programs that can withstand close scrutiny.

POMCUS. POMCUS is organizational equipment stored in company and battalion sized packages, in a ready-for-use condition. The purpose of POMCUS is to position the majority of a unit's organizational equipment forward, so that in time of crisis only unit personnel, with minimum equipment, will require airlift to meet the requirements of a NATO contingency. During REFORGER 84 3,687 vehicles, 2,577 wheeled and 1,110 tracked, plus 1,853 trailers, were drawn from POMCUS. Less than 2 percent of the vehicles were deadlined when drawn. This high number of operational vehicles is evidence of the efficiency of the POMCUS program.

The concept of prepositioning unit sets of equipment began in 1961. Currently, POMCUS consists of four division sets of equipment. The Army program is for six division sets. Sites for two additional sets are under construction and programmed for completion in late FY 85. One site in set 5 has already received equipment. Prepositioning for the fifth and sixth division sets will continue as these sites are completed. The FY 85 Defense Appropriations Act included restrictive language requiring the Army to ensure that, for those items being shipped to the fifth and sixth sets, the Active and Reserve Component fill of the established requirement will not fall below 70 percent and 50 percent respectively.

Reichel Logistics Facility. In the late 1970's analysis of the evolving threat to Europe's Central Region concluded that NORTHAG would be defending against the most probable main attack of the WARSAW Pact. As a result, the United States agreed to reinforce in an area well to the north, outside the traditional U.S. Area of Operations (CENTAG). Concurrently, we made a national commitment to develop the capability to reinforce NATO with ten divisions within ten days of a national decision. The Reichel facility is ideally located and suited to provide cost effective logistical support coordination necesssary to accomplish reinforcement objectives for the III U.S. Corps in the North.

To date, Congress has appropriated funds to transport and preposition war material in the NORTHAG area. In addition, Congress authorized purchase of this facility during the FY 85 budget process. However, the Appropriations Conference Committee deferred funding and directed another attempt be made at the highest levels to have the Federal Republic of Germany purchase the facility. The F.R.G. had previously agreed to buy the land when they denied our request that they purchase the Reichel Facility. Efforts to obtain F.R.G. funding and review of the project in terms of NATO infrastructure funding are ongoing. Failure to purchase this facility precludes its full use and severely impedes the process of developing war planning and support capability which is urgently needed in that area. All sites in POMCUS 5 and 6, provided by host nations and NATO infrastructure, will be ready to receive equipment by this June. Finally, the Reichel facility also serves as a community support base for a total of approximately 5,000 military and family member personnel in and around the Rheinberg, F.R.G. community area. It is presently woefully inadequate and our personnel there are experiencing substantial hardships. This project remains USAREUR's highest priority for MCA funding.



SUSTAINING THE FORCE

Sustainment of the Total Army is a multifaceted undertaking. A deployed force must have the wherewithal to sustain itself in the field. Initiatives to deal with problems of tactical water support, petroleum distribution, wartime medical support, preplanned contingency contracting, wartime Host Nation Support, and war reserve stocks, address that requirement. The Army, as an institution, must also be able to sustain itself as a force in readiness. It does so by activities such as depot maintenance which prolongs the life of equipment, and by supporting the force with the necessary peacetime secondary items, spares and repair parts. It sustains itself by ensuring the safety, security, and survivability of U.S. Army nonstrategic nuclear weapons and by steps to protect Army members from political terrorism. The Army has an aggressive program to enhance personal safety, thereby conserving our most precious resources, our men and women. The Army guarantees its future by providing the opportunity for its midlevel leaders to advance their education. Finally, the Army shows a genuine concern and commitment to the welfare of the Army family, in the long run as vital to readiness of the force as good equipment and tough training.

SUSTAINMENT IN THE FIELD

Tactical Water Support. Tactical water support is a critical element of sustainability. Resources are required to provide water detection, production, treatment, storage, distribution, cooling and troop support to CENTCOM forces in an arid environment. Equipment procured with prior year funds is being delivered and will be used to establish a training program at the NTC, for issue to units authorized specific items, to fill FORSCOM operational project stocks in support of CENTCOM requirements, and to establish a training base for exercises.

The Army, as DOD Executive Agent for Land Based Water Resources in contingency operations, has developed, in coordination with the other services and DOD agencies, concepts and doctrine for water support. Equipment requirements have been determined and funds have been programmed to support the expanded CENTCOM force.

Some of the equipment procured to support CENTCOM requirements has been prepositioned on board ships in the Near Term Prepositioning Force. Included in the prepositioned equipment plan is a LASH barge mounted 150,000 Gallon/Day water purification system and a 300,000 Gallon per day BC 231A Barge mounted water purification system. The two barge systems provide offshore water purification capability and provide improved water support for CENTCOM forces.

The FY 86 budget will move the Army closer to achieving water support capabilities required to support the long term CENTCOM force. Worldwide water support capability will be modernized based on concepts, doctrine and equipment developed to meet the challenges of water support in an arid environment.

POL Distribution. Distribution of bulk petroleum is one of the most critical elements of readiness and sustainability. The Army has the responsibility for petroleum distribution to all services in both a developed and undeveloped theater. The Army's mission is to maintain a flow of bulk fuels from a combination of off-shore and pier-side tanker discharge through a network of on-shore storage and distribution systems. Petroleum distribution equipment in the Army Facilities Component System is 30 to 40 years old, labor intensive, and no longer commercially available.

The Army has programmed funds to improve POL off-load and inland distribution through use of non-developmental items. This equipment is quick and easy to install, increases unit productivity and reduces force structure shortfalls. The Army has begun procurement of light weight aluminum pipeline and quick lock couplings. Use of this equipment will increase the pipeline lay-rate from one to fifteen miles per day per company. Increased use of pipeline will reduce force structure requirements. The Army has also begun procurement of 5,000 barrel, rapidly installed, collapsible POL storage tanks and FY 86 will begin procurement of an improved gravitational single point mooring system.

The Army Facilities Component System will continue to be updated with commercially available, non-developmental equipment.

Medical Readiness. Medical readiness has been severely limited by two major factors: a shortage of medical equipment for hospital units and a shortage of professional medical personnel needed to support wartime requirements.

The programming and budgeting efforts of the past few years are now producing significant progress toward enhancing medical readiness. The current budget addresses the severe medical shortfalls that still exist. It contains for the first time sufficient funds to equip the entire medical force, with emphasis given to equipping the Reserve Components.

In FY 83 equipment for six hospitals was purchased and delivery to the field scheduled for 1985. Major purchases of medical equipment for 36 hospitals in FYs 84 and 85 will be delivered in 1987 and 1988. These 36 hospital sets are the first to be configured with the new generation Deployable Medical Systems (DMS) equipment. The DMS program is a four service effort to standardize field medical equipment for all services. During the FYs 86-90, a total of 137 additional hospital equipment sets are scheduled for purchase. This will complete initial equipping and modernization of all hospital units currently in the U.S. Army force structure.

Considerable progress has been made in recent years with the development of new recruiting incentives and programs to attract and retain critically short professional medical personnel in both the Active and Reserve Components. As a result, active duty physician strength reached full authorization this year. Though Reserve and National Guard units continue to be substantially understrength in both physicians and nurses, recruiting programs are producing gains in unit strength. There continue to be concerns that some critical specialties, particularly surgical and supporting nursing specialties, are not rising in strength as rapidly as total strength.

Recruiting programs are being modified and developed to target the critical shortfalls in professional medical personnel. These programs are focused on the Reserve Components with emphasis on the Troop Program Units and the IRR. These initiatives include incentives for medical students in critical shortfall specialties, flexibility in the Active Duty for Training participation, increased flexibility in the "retirement points" program, and direct monetary incentives.

Industrial Preparedness Planning. Congress and the Army have recognized the need for a viable industrial base. Industrial Preparedness Planning (IPP) is part of the Industrial Preparedness Program and provides meaningful steps to enhance the Army's industrial readiness during mobilization or national emergency. It includes development of emergency production requirements for critical material; evaluation of production methods and planning emergency conversion of commercial sources. Recent funding shortfalls have reduced planning efforts with industry and limited planning to prime contractors. Increased funding in FY 86 will expand development of data for responding to a crisis short of mobilization.

Wartime Host Nation Support (WHNS). Shortages exist in support units that give forward deployed and reinforcing units their real and sustained combat capability. WHNS is being aggressively pursued to help correct shortfalls using host country resources. Our WHNS agreement with the Federal Republic of Germany (FRG) is unique in that the FRG has agreed to activate Reserve units to help provide USAREUR's wartime support requirements. Reserve unit activations between 1983 and 1987 provide for support in these functional areas: transportation, medical evacuation, POL/ammo handling, decontamination, and security. The Army is committed to using Host Nation Support as a viable alternative to U.S. forces on the ground. Continued implementation of the US-FRG WHNS Agreement is vital to continued risk reduction measures in NATO.

Preplanned Contingency Contracting. To further expand the support base available to the Army, a plan for the use of preplanned contingency contracts with industry is being developed. The Logistics Civil Augmentation Program is an initiative to provide the commander with support from civilian industry in time of national emergency. Policy and procedures are being developed to allow execution of contracts beginning in FY 86. Discussions with selected U.S. industry are ongoing and the response has been favorable. While all the details have not been completed, the Army is convinced that prudent use of preplanned contracts with industry will provide an additional source of critical wartime support.

Increased War Reserve Stockage. For the Army to meet the challenge of today's modern battlefield, we must continue our efforts to acquire and store sufficient stocks of equipment, ammunition and secondary items to perform assigned missions until the national production base can meet continuing force materiel requirements. War reserve stocks meet this need. They are acquired during peacetime for the purpose of replacing wartime battle losses and replenishing consumption until resupply can be accomplished from the sustaining base.

We are well along on a program of steady growth and improvement in war reserve stockpiles, both in quantitative and qualitative terms. New weapon and equipment systems are being added to sustaining stocks while field units are receiving these items. Modernized munitions are being acquired, as well as critical secondary items to include capital investment items such as tactical vehicle engines and transmissions. Funding at requested levels yields additional stockage; however, required sustainment levels will not be reached in the near future.

Significant shortfalls continue to exist. Major equipment needs are becoming more critical as a result of force modernization. Ammunition is similarly affected by modernization designed to obtain increased lethality. Secondary items—driven by both equipment and individual soldier support requirements—also need more emphasis. Partial congressional support will only prolong shortages of sustaining items. Inadequate levels of sustainment stock place deployed and deploying forces at risk when loss and consumption rates increase during wartime.

Ammunition War Reserve Stockage. Ammunition shortages continue to be among theater commanders' most urgent concerns. The Army is continuing its policy to preposition ammunition in overseas theaters to support deployed forces and forces planned for early deployment. Other programs modernize the munitions stockpile. The FY 86 program will increase sustainability for U.S. Army forces on the ground in Europe and the Pacific as well as the CONUS-based stockpile for the Army Rapid Deployment Force. Modernized munitions are being added to war reserves for the 155mm howitzer weapons systems, HYDRA 70 2.75-inch rocket systems, and new families of ground mines. Funding at requested levels provides additional stockage; however, required sustainment levels will not be reached in the near future.

Alternative Energy. The availability of crude oil exports from countries outside the Persian Gulf continues to decline for a variety of reasons: expanding domestic consumption; lack of capital investment in production facilities; and the withdrawal of technical expertise. At the same time, the major oil producers of the Western Alliance, United States, Canada, Norway, and the United Kingdom are operating at full production capacity. At present, Arab and Iranian crude oil represent an insignificant amount of the total US oil imports. Iran and the Arab states are the principal suppliers of the Western Alliance.

The Strategic Petroleum Reserves represent valuable insurance against supply shortages and the reserves have grown substantially since the supply interruptions of

1979. However, privately-owned commercial inventories have declined by an almost equal amount and Strategic Petroleum Reserves could not duplicate the role of private industry.

These factors combine to make the United States and members of the Western Alliance vulnerable to supply interruptions and price escalations. They demonstrate that U.S. reliance and dependence on Arab and Iranian crude oil is much greater than generally realized and it will increase in the future unless actions are taken now to expand use of alternative energy sources. The Army has taken steps to obtain and use alternative fuels. Of all the alternative fuels, shale oil most closely resembles conventional crude oil. In early 1985, as part of project RIVET SHALE, the Army will validate shale fuel as an operational fuel for military vehicles and equipment at Dugway Proving Ground and at Fort Carson. The field site validation test will last from 18 to 24 months.

SUSTAINMENT OF THE FORCE

Depot Maintenance Activities. A comprehensive depot maintenance program is vital to the sustainment and readiness of combat forces. The materiel maintenance element of the program provides an efficient and effective source of supply by returning serviceable major and secondary items to the central supply system thus sustaining responsive materiel support between intermediate support activities and the user. Materiel maintenance also supports foreign military sales programs and helps maintain viable production capability for mobilization requirements. The maintenance support activities element provides for fielding support for new systems, maintenance engineering, new equipment training, and revision of technical publications. The FY 86 budget is tailored to assure the Army a balanced depot maintenance program which continues to provide responsive support for units in the field though fiscally constrained in the maintenance support activities arena.

Peacetime Secondary Items Program. Peacetime secondary item stocks are a critical ingredient of Army Readiness. Ongoing modernization of Army forces and equipment, coupled with greater requirements for unit readiness, dictate continued support for this program.

Our requirements for spares, along with our supply posture, has increased consistently since 1981. These increases, which we feel are reasonable, have two primary causes. The introduction of new sophisticated weapon systems creates increased requirements. And, as we introduce these systems, the displaced systems are used to fill other Army needs in both the Active and Reserve Components. Therefore, they generate continued requirements for spares. The Army continues to fully fund the peacetime requirement for spares.

Safety, Security, and Survivability (Nuclear Surety) of U.S. Army Nonstrategic Nuclear Weapons. No single event could have a more profound impact upon the deployment of nuclear weapons than an even partially successful penetration of a nuclear storage site. Therefore, Nuclear Surety is an extremely important issue. Recent world events have brought a vivid awareness of the magnitude of terrorist capabilities and a realization of the serious consequences of such actions should they ever be directed against nuclear weapons.

In FY 76, a Long Range Security Program (LRSP) was developed for U.S. Army special weapons storage sites. This program was designed to use currently available state-of-the-art equipment to improve the ability of security forces to detect and prevent covert attempts to penetrate a site. It also included the construction of hardened facilities for protection of site security forces. The LRSP included civil construction and an Intrusion Detection System. Forty-eight of the sites were prefinanced by the United States. The remaining sites were financed under the NATO Infrastructure. Civil works construction is scheduled for 1986. During the FY 79 time frame, the United States began a physical security research and development program to identify procedures and equipment which could enhance the ability of security forces to prevent unauthorized access to storage sites. A recent initiative resulting from this research and development activity is the Weapons Access Delay System (WADS). WADS is a package of individual delay components designed to provide additional delay to an adversary attempting to remove a weapon. Construction for WADS has started with expected completion by FY 86. Additional initiatives, such as advanced stage concepts, force-on-force security training exercises, and use of control/denial features are being pursued.

Anti-Terrorism. Terrorism directed against the U.S. Government has continued to increase in both the number of actions and the severity of those acts. The Army has the responsibility to provide protection to the Total Force to include Active and Reserve Components, DA civilians, and families. In response to our increasing needs in this critical arena, the Army has established an Army Staff Anti-Terrorist Task Force (ATTF). The Task Force has conducted a major study and participated in a Terrorism Functional Area Assessment (FAA) to determine mission responsibilities and requirements. The Army has developed a long-term improvement program to enhance total force protection. These initiatives will provide significant improvements in physical and personal security, intelligence, training, and other areas of terrorism counteraction. They have resulted in additional funding requirements for FY 85 and beyond. Through these programs, total force protection and the overall readiness of the Army will be enhanced. The ATTF remains in existence to lead Army programs for combatting terrorism, resolving issues from the terrorism FAA, and to undertake additional measures to enhance the Army's terrorism counteraction capability.

Noncommissioned Officer Education Just as the Army requires high quality soldiers as the best investment in future readiness, the Army requires better educated leaders in the noncommissioned and warrant officer levels.

The Service Members Opportunity Colleges Associate Degree (SOCAD) is a worldwide, off-duty, voluntary degree program offering fifteen technical occupational areas and one general studies area. Each technical degree program relates directly to a noncommissioned officer or warrant officer military occupational specialty. Ninety percent of the soldiers enrolled in the technical areas are pursuing degrees related to their occupational specialty making the SOCAD program a career enhancing program for the Army.

Noncommissioned officers in grades E-5 to E-9 with less than 14 years of service are eligible to receive 90 percent tuition assistance to enroll in off-duty voluntary postsecondary courses. All other service members receive 75 percent assistance. The Basic Skills Education Program provides education in basic academic skills to soldiers prior to or during participation in noncommissioned officer courses. Reviewing and refreshing basic academic skills has been shown to reduce attrition due to individual educational weaknesses. Increased academic support to noncommissioned officers is programmed for FY 85 and FY 86.

SAFETY. Personnel safety of Army members is important for three reasons. It preserves the fighting strength of the Army and contributes directly to readiness and combat effectiveness. Second, units that are well trained and well led have fewer accidents. They possess the ability to accomplish the mission because they do things the right way. Finally, a commitment to personnel injury prevention demonstrates the Army's concern for the welfare of both military and civilian members. People are our most precious resource.

The accident prevention objective of the Army is to meet or exceed the President's and Secretary of Defense's goal of a three percent reduction in military and civilian personnel injuries each year for the period 1984-1988. In FY 84, preliminary figures indicate that the Army achieved a four percent reduction in military injuries but failed to achieve the three percent goal for civilian personnel (figure 2.20). Plans have been developed to ensure the goal can be reached during FY 85 and that the overall five-year goal to reduce military and civilian injuries will also be achieved. Actions involve systemic improvements such as safety technical and leadership training in the Army school system and improvements in the materiel acquisition processes. They also involve programs to confront high frequency/severity accidents involving back injuries, injuries resulting from M151 1/4-ton jeep accidents, and injuries in tracked vehicle operations. A family safety initiative is being undertaken with the support of the National Safety Council which involves examining the extent and character of accidents occurring to Army family members and developing practical countermeasures to reduce and eliminate problem areas.

NONFATAL CIVILIAN INJURIES

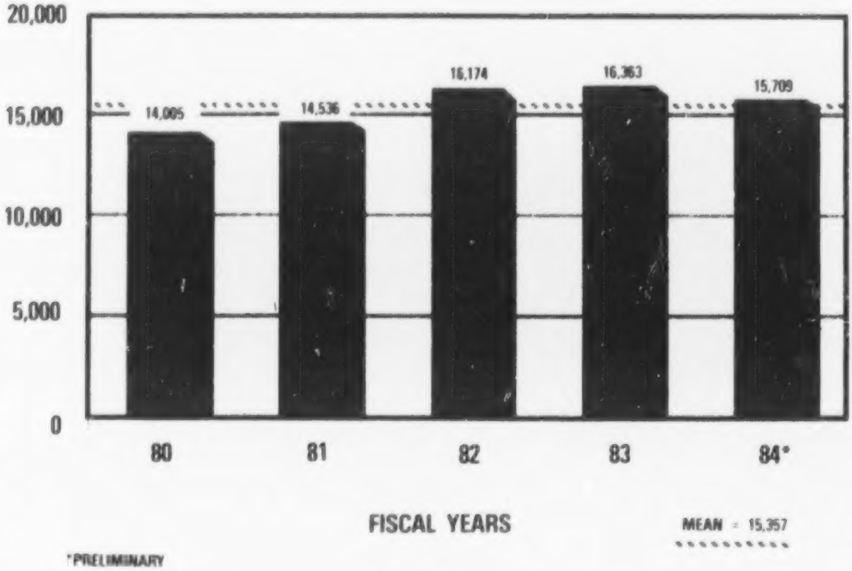


Figure 2.20

THE ARMY FAMILY—COMPONENT OF READINESS

1984 Army Theme--The Army Family. 1984 was designated the year of "The Army Family." This theme provided impetus to support the Army's commitment to Army families, and expanded the concept to include a much wider interpretation. Family initiatives have been incorporated into the Army Plan, a basic planning document which guides the Army as an institution to the year 2001. Conceptually, the 1984 theme addressed an Army Family of three dimensions: The Family of Components, The Family of Units, and the Family of People.

The Family of Components is concerned with the readiness of the Total Army and encompasses the relationships among the Active Force, Army National Guard, Army Reserve, civilian employees, and retirees. Total Army readiness is dependent upon the effective linkage of these essential components of the "Army Family."

Accomplishments which support the Family of Components include significant actions that strengthen the capabilities of the Total Army in the areas of manning, equipping, training, force structure, and sustainment. Specific examples include providing new equipment to the Army National Guard and the Army Reserve, the training of National Guard battalions at the NTC, increasing full-time manning in our Reserve Components, various training and education initiatives, improving relationships with round-out units, and with the establishment of additional light divisions.

The second dimension of the theme is the "Family of Units." This addresses the relationship that soldiers have with their unit, and the unit's ties to other elements of the command, for example, a squad to platoon and platoon to company.

Accomplishments which support this dimension of the Army Family are the new manning system initiatives for COHORT and the regimental system. In addition, the Family of Units dimension focuses on improvement of unit training areas, sponsorship programs, strengthening the relationship between soldiers and their leaders, reducing disciplinary problems, and enhancing unit cohesion through sports activities, recognition ceremonies, training programs, unit history programs, and junior enlisted outreach programs.

The third dimension of the theme is the "Family of People." This involves each individual's sense of family responsibility and the Army's concern for its members and their families. Soldiers and their families are entitled to the same quality of life as the society they are pledged to defend. Our commitment is to nothing less.

The Family Action Plan provides the mechanism to support the Family of People. The Army Staff and all major commands have been seeking resolution of the 67 issues outlined in the plan. Initial internal Army efforts have been targeted on quick action to complete the low cost-high payoff issues. The following examples illustrate some of the efforts that have been undertaken by the Army during this past year.

A new sponsorship regulation is being published. It revises significantly the Army's sponsorship program. The objective is to ease the stress associated with relocation and provide soldiers and families with critical information, advice and support to help a newcomer get settled quickly and begin to feel at home in a new environment. A recent change in our family housing policy allows spouses of Army personnel to sign the required documents to obtain on post housing without a power of attorney from the service member. This change makes the relocation process a little easier. Another housing policy change allows family members to participate in the panels that design the interior of family quarters, soliciting ideas and recommendations from the people who live and utilize these facilities. A third policy change makes all junior enlisted soldiers in paygrade E4, who are otherwise qualified, equally eligible for family housing. Junior enlisted soldiers in pay grades E3 and below may now be assigned family quarters if they are otherwise eligible.

An Army-wide training and orientation effort has been undertaken regarding the Army's commitment to its families. This consists of family awareness training for the chain of command through lesson plans and a program of instruction in leadership and professional development courses at all Army service schools. The instruction is designed to teach Army leaders about their responsibilities to families, and to make them fully knowledgeable about family needs, conditions, and requirements. Leaders are trained to account for the effect their daily decisions have on the soldier's family life, and to view families as part of their mission, not interruptions. They are trained to establish plans and programs for family support well in advance of deployments, training exercises or other protracted absences. Including spouses of battalion and brigade level command selected officers in pre-command training has provided additional emphasis on family issues.

A second part of the family orientation effort is focused on the family members. Two videotapes have been made for world wide distribution. The first has, as its primary audience, spouses of basic entry level soldiers arriving at the service member's first permanent duty station. The film documents the basic aspects of Army lifestyle, history, culture, benefits, services, facilities, and opportunities. The film provides information and answers questions at the earliest possible time in order to avoid unnecessary hardships due to lack of information. The film will improve the Army's effort to get information to the hard to reach spouse, and help ensure a smoother adjustment of the family into the Army community. New family members are shown the film when they apply for their first identification card.

The second film is designed for the seasoned soldier, the civilian employee and family member upon arrival at any installation. It is tailored to the viewer's existing knowledge of the Army system and will be used in conjunction with the installation's newcomer orientation briefing. In addition, for each person viewing the film, a booklet is being developed in four languages, English, Spanish, German, and Korean, which supplements the film with detailed explanations and additional information. The idea is to provide standardized information for soldiers and family members.

A family fitness program has led to the establishment of health and fitness advisory teams and fitness facilitators at each medical center and medical treatment facility. In addition, a directory of Health and Fitness Education Resources, a planning guide for health fairs, and a Family Fitness Handbook have been published and distributed. This concept focuses on "total family wellness". It includes advice on nutrition, exercise, balanced diets and recipes which support maintenance of the total fitness spectrum.

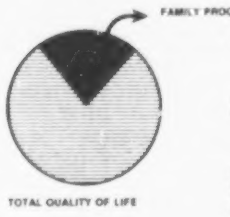
Recent policy changes made in our employment programs are making it easier for Army employed family members to get a job when their sponsor moves to a new duty station. These changes provide family members of military and civilian employees serving in civil service positions overseas, non-competitive appointment to civil service positions upon their return to the United States. Another effort involves the priority placement family member referral program which is being tested within the continental United States. In the area of non-appropriated fund employment, a new policy permits Army family members, currently employed by such activities, to obtain employment through non-competitive reinstatement in a non-appropriated activity at their new duty assignment within six months of separation from their old assignment. This policy applies to all non-appropriated fund employees, but it benefits Army family members who are most subject to frequent relocation. Revised guidance has been issued to increase the emphasis on job sharing, part-time employment, and youth summer hire programs. Creation of one-stop employment centers where information about federal, state and local employment opportunities is consolidated represents a major step forward.

Other internal Army efforts include formation of volunteer family support groups at small unit level, improving the training, use and referral of volunteers, creation of adjustment programs for bi-cultural families, provision of a comprehensive strategy for prevention, education and counseling for drug and alcohol abuse, improvements in the family housing self-help program, revision of on-post quarters termination procedures, the addition of first-termer family policy issues to the Family Action Plan, use of marketing and information campaigns to inform soldiers and family members of benefits and ongoing actions that support community and family programs, initiation of studies and surveys of family safety measures, and conduct of a comprehensive study of the youth activities program.

Great strides have also been made in bringing about necessary changes in community life management. In November, 1984, the Army opened the U.S. Army Community and Family Support Center (USACFSC). Its establishment reinforces the Army's commitment to family and community initiatives and institutionalizes the improvements made in community and family activities. This new center is a field operating agency of the Deputy Chief of Staff for Personnel. It brings together community and family functions previously performed by The Adjutant General, Civilian Personnel Center, Military Personnel Center, and Office of the Deputy Chief of Staff for Personnel. Its functions include family support, installation support, leisure sales and service, lodging and hospitality operations, Army recreation machines, nonappropriated fund personnel management and community facilities construction. The Army family initiatives symbolized by and embodied in the continuously updated Family Action Plans seek to provide quality services and programs to meet the needs of Army families and community activities.

We are determined to do everything we can within available resources to improve the quality of life for our soldiers and families. A lot is being done with existing resources, but the Army cannot do it all without the help of Congress. To sustain this effort, and to continue the progress being made, our FY 86 budget addresses issues that have a high payoff but require addditional funding. The chart below depicts the resources required to support the Army family program. These resources are part of the total quality of life program within the Army. They are designed to reduce stress on military families, improve those programs that support our families and begin to close the gap that exists between the benefits and services available in the society that we are pledged to defend and the limited benefits and services that our soldiers and families currently have available to them.

QUALITY OF LIFE PROGRAM — FY 85/6



QUALITY OF LIFE MAKE UP ($MILLIONS)

	FY85	FY86
FAMILY PROGRAM (INCL CCC CONST)	$1405.7	$1995.9
CONSTRUCTION	895.8	1066.9
COMMUNITY (LESS CCC CONST)	(49.3)	(49.4)
MEDICAL	(164.9)	(113.0)
BARRACKS & DINING FACS	(295.3)	(430.2)
MAINT & PROD FACILITIES	(390.1)	(474.3)
REPAIR & MAINTENANCE	2805.0	2910.8
CHAPLAINS ACTIVITIES	15.0	15.3
DRUG & ALCOHOL ABUSE	19.6	22.3
COMMUNITY & MORALE SUPPORT	251.5	283.9
OTHER PERSONNEL SUPPORT (i.e., Equip & furnishings to support Chap edu fac)	1.5	1.7
UNACCOMPANIED PERSONNEL HOUSING OPS & FURNISHINGS	96.5	106.4
TOTAL	$5484.8	$6388.2

16.5% GROWTH

Figure 2.21

Funds to accelerate long required upgrade and construction of child care centers are included within the FY 86 budget request. Child care is a readiness issue. Army active duty members have a total of 600,000 children. Fifty percent of them are under age five. Providing adequate child care facilities is one of our prime concerns. In 1985 Congress approved five child care projects. In 1986, 19 projects have been requested. Additional resources ($12.6M) have been targeted for the Army's Exceptional Family Member Program. Efforts to identify, diagnose, refer, and treat handicapped family members have been increased and the requested resources will support this program.

New programs address family initiatives in support of Army Community Services (ACS), a program which is the primary resource for family support on Army installations. ACS has never been adequately funded to perform the missions and provide the services that Army families deserve. A financial assistance and consumer education program funded at $3.4 million will offer education and debt liquidation counseling to soldiers and their families. Home based Child Care programs, $6.4 million, will provide for the supervision of 9,660 certified child care homes as a supplement to center-based care and to provide for extended hours. Family member employment referral programs funded at $700 thousand will provide nineteen one-stop information centers to assist family members with continued employment in their highly mobile lifestyle. This program will coordinate volunteer activities and will have tremendous payoff for our Army communities. Finally, $3.8 million provides for a family services coordinator at ACS centers to offer counseling and supportive services to handicapped family members, information and referral, follow-up and foster care. It also provides for collection of information regarding world-wide medical and educational resources worldwide for use in the automated assignment process of service members. Other family programs include funded student travel ($1.7 million), family safety programs ($1 million), research aimed at family retention, and evaluation of the Family Action Plan and quality of life factors with regard to their impact on readiness and retention ($7 million).

The Army remains committed to the goal of building a strong Army-family partnership and to assuring adequate support to Army families. Facilities, services and programs for families are not considered frills. There is a strong correlation between the soldier's commitment and Army readiness. That commitment may fluctuate depending on how the soldier feels his family is doing. This can have a large effect on our readiness. We have to take care of our families if we intend to have a strong and ready force. There is a great deal more to be accomplished. Congressional support for these programs will send a much needed positive signal to our soldiers and families about the value placed on their contribution to our national security.

At the onset of this year of "Leadership," it is necessary to assure the members of the Army family that we have not abandoned the efforts begun during the year of "The Army Family." The depth of this commitment has been symbolized by the creation of the USACFSC. Our efforts will continue to atend to the programs necessary to foster the interdependence between the family and the Army. Leadership will provide us the direction to turn the challenges into opportunities.

Dining Facility Modernization. Dining facilities are an important part of the Army effort to improve the quality of life for the soldier. Good dining facilities have a positive impact on soldier morale and contribute to unit cohesion and soldier retention. The Dining Facility Modernization Program is a Department of the Army sponsored program to upgrade 221 troop dining facilities to DOD standard by providing modern food service equipment, serving lines to support regular and short order menus, and a contemporary dining environment. The funding profile provides a sound program which will eliminate the modernization backlog by 1990. If full funding of this program is not provided, modernization of existing facilities will be slowed which will result in continued building deterioration, increased modernization costs, and preclude attainment of improved food service support to the soldier.

The Commissary Benefit. The mission of the Army commissary is to provide resale items to authorized patrons at the lowest practicable price in a facility designed and operated similarly to commercial supermarkets. Army commissaries provide an essential non-cash benefit which is considered by service men and women to be a promised condition of employment. An independent survey conducted by American University in 1983 showed that patrons receive approximately 26 percent savings by shopping in an Army commissary. Commissaries play a key role in maintaining morale and ensuring a high quality of life for the Army family.

Commissary Construction. The commissary construction program provides for replacement or modernization of commissaries from surcharge funds paid by commissary patrons. Since 1980, surcharge funds have been used to replace six commissaries at a cost of $37.2 million and modernize 13 commissaries at a cost of $29.4 million. Replacement commissaries are under construction at Forts Jackson and Meade, at an estimated total cost of $20.6 million. The surcharge construction program for FYs 85 through 87 provides for replacement or modernization of 21 commissaries at an estimated cost of $161.5 million.

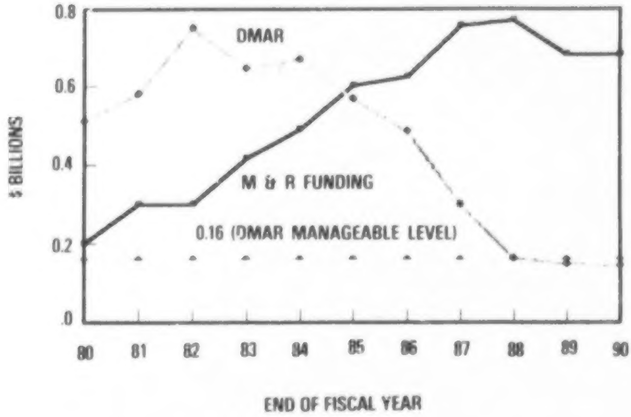
Use of Credit Cards in Post Exchanges. Since their formal establishment in 1895, the mission of the military exchanges has been to provide merchandise and services to military members and their dependents, and to generate reasonable earnings to supplement congressional appropriations in support of military morale, welfare and recreation programs. The Army and Air Force Exchange Service (AAFES) seeks to improve the quality of life for its almost seven million customers within the military community. Customers' loyalty depends upon their perception of the Exchange Service as competitive and convenient. Recognizing this, AAFES is committed to customer service and significant price savings.

The quality of life provided the military services through the exchange entitlement can be greatly enhanced by authorizing the use of commercial credit cards in the exchanges. This would be a non-budget improvement. It would reassure the military members and their families that their living conditions are comparable to their civilian counterparts by providing them the ability to shop at the exchanges, paying for their purchases with a credit card as they would in the civilian sector. The Army supports efforts to seek congressional approval for such initiatives.

Family Housing. The availability of adequate, high quality family housing is an important factor in the quality of life enjoyed by soldiers with families. Prior to FY 84, family housing was severely underfunded for many years as a result of fiscal constraints, unrealistic inflation rates, unexpected increases in fuel costs and, during FY 78 through FY 80, unfavorable fluctuation in foreign currency exchange rates. These factors and others combined to generate large backlogs in most areas of family housing. However, since FY 84 family housing has begun to emerge as an adequately funded program.

In response to Army initiatives, in FY 83 the Secretary of Defense transferred the Defense Family Housing Management Account back to the services for full management. Transfer of the account has resulted in the Army's ability to prioritize its resources against its housing needs. It gives the Army an increased capability to balance its facilities accounts and fix its family housing deficits. The backlogs that exist in maintenance and repair, Energy Conservation Improvement Program, and new construction are all being attacked and systematically reduced. The current posture will permit significant improvements to the living conditions of our soldiers and their families worldwide. The backlog of Deferred Maintenance and Repair (DMAR) was substantially reduced for the first time during FY 83.

DMAR REDUCTION — PROJECTION



DMAR DEFERRED MAINTENANCE & REPAIR (AFH APPROPRIATION)
M & R MAINTENANCE & REPAIR

Figure 2.22

In FY 85 the Army initiated a program for a stable annual investment to rehabilitate, renew, or replace those deteriorated or obsolete dwelling units currently in the Army inventory. The FY 85 budget continued the Army attack on large maintenance backlogs to improve the living conditions of our soldiers and their families. This year will see a reduction in the backlog of approximately $65 million. Approximately 711 substandard dwelling units will be upgraded or eliminated with an additional 1,728 units receiving major whole-house type rehabilitation. Energy efficiency will be improved in approximately 6,300 units worldwide. The Army has authorization to construct 831 new units of family housing as a result of the FY 85 program. Of this authorization, 292 units will to be constructed in Europe. Build-to-lease and Housing Assurance programs are new innovative concepts which were first approved in FY 84 to provide additional housing at CONUS locations. Additional authorization was provided in FY 85 to accommodate stationing of new Light Infantry Divisions.

The Army Family Housing appropriation is shown in Figure 2.23. There is real growth in all areas of construction, leasing, operations and maintenance. There is adequate funding to: reduce DMAR by $70 million; construct mobile home facilities for 334 units; construct 1,987 new housing units (CONUS-1511; Europe-476); eliminate or upgrade 1,629 substandard dwelling units; improve energy efficiency in over 4,054 units; and provide whole-house renewal for 3,015 units. Additionally, the budget requests authorization for 19,170 leases which support the needs of forward deployed soldiers and provide housing for Department of the Army civilians living in Panama and Korea.

Army Family Housing
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
New Construction	73	43	189
Improvements	100	100	166
Operation & Maintenance	983	1,084	1,122
Leasing	78	105	134
Total Program	1,234	1,332	1,611

Figure 2.23

The FY 86-90 Family Housing Program will:

Initiate the mobile home facilities construction program.

Eliminate the housing deficit.

Reduce the deferred maintenance backlog to a manageable level by end FY 88.

Eliminate or upgrade all substandard dwelling units.

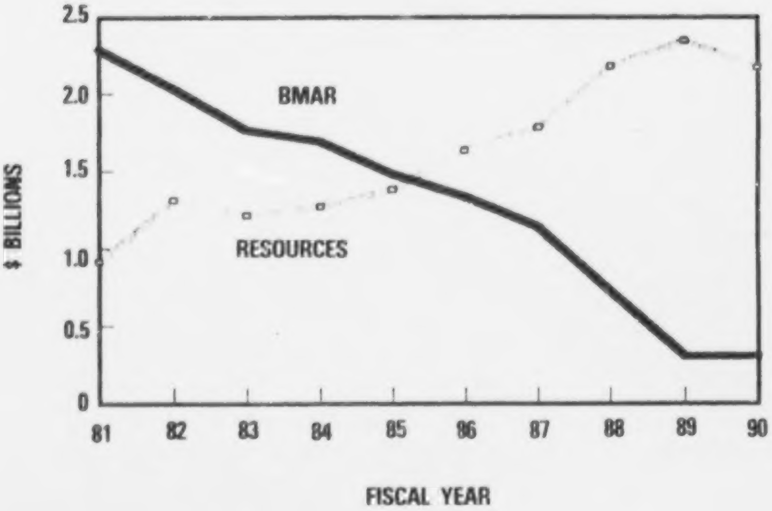
Complete energy conservation improvement program.

The requested funding levels must be fully supported to improve the living conditions of our soldiers and their families.

Real Property Maintenance Activities. The Army operates and maintains an aging physical plant with extensive holdings worldwide. There are over 300,000 buildings and facilities in the inventory with an average age of 37 years. Many of the buildings and utilities systems predate World War II. This is particularly true in Europe where the facilities occupied include turn of the century buildings that once housed cavalry. Prior to 1981 the United States did not invest in any long-range program for renovation or new construction overseas. As a consequence, the deterioration of facilities was widespread and created a degradation in morale and readiness. In CONUS we were experiencing a progressively higher rate of deterioration as major subsystems of the facilities began to wear out. Funding did not keep pace with these requirements and the BMAR work began to grow at an alarming rate. Efforts to contain the backlog were attempted in the late 1970's, but, by this time the dual effects of inflation and deterioration were forcing costs upward and the BMAR was approaching the $2 billion range by the beginning of the eighties. To counter this, in 1982, the Army increased the funding for Europe significantly and this infusion of funds began to help overcome the years of facilities neglect. In the meantime, the funding for all commands was raised to the levels needed to offset the increasing annual requirements and arrest the growth of the backlogs. In FY 82 BMAR turned sharply downward. This decline continued in FY 83 and FY 84 with reductions of 16 percent and 9 percent respectively.

The budget for FY 85 is expected to continue BMAR reductions by 10 percent to 15 percent. Improvement in the condition of facilities will generally occur in all commands and facilities categories. The overall strategy followed is to halt deterioration by prompt repair and maintenance of existing facilities, and to renew or replace facilities that do not meet standards. The majority of the funds will be spent to fix structural or utility systems defects which, if ignored, would have serious consequences and would shorten the life of the facility, impair the use or erode the quality of life of occupants. Master planning will be emphasized to bring it up to full potential as a foundation for unified facilities planning. Maintenance and repair will continue to be performed at levels which allow further reduction of backlogs to reach congressional containment of $1.241 billion during FY 87 and eliminate excessive levels by FY 89.

BMAR BASED ON
FY 86 - 90 ARMY BUDGET & FYDP



BMAR - BACKLOG OF MAINTENANCE & REPAIR
(RPMA ALL FACILITIES EXCEPT FAMILY HOUSING) - OMA APPROPRIATION)

Figure 2.24

THE ARMY OF TOMORROW

LONG RANGE PLANNING

The overall goal of the Army is to achieve and maintain a level of readiness which signals the United States' preparedness and willingness to protect and promote its national interests. To ensure that signal is credible, the Army's readiness to fight today and in the years to come must be unmistakable.

Decisions and actions taken today will define tomorrow's capabilities. Realistic planning requires an accurate assessment of the future threat and the likely global environment in which it will have to be met. The Army's plan to deal with this threat must recognize an environment of constrained resources.

The Army Long Range Planning System (LRPS) will provide the basis for the Army to address the uncertain world it may face 10 to 20 years in the future. It will bring long-range assessments and concepts to bear on current decisions. The LRPS will develop long-term plans which consider risk, resource constraints, and affordability. These plans will be used by planners and programmers to support the Army Budget process and to describe how the Army should prepare for war, sustain itself, and win in any future environment.

RESEARCH AND DEVELOPMENT

STAYING ON THE FORWARD EDGE

An active research and development program is essential for tomorrow's readiness. A strong technology base is especially vital to the Army because we must rely on our technological superiority to provide leverage to offset Soviet numerical advantages. We must avoid "technological surprise," in which our weapons are rendered prematurely obsolete. Our current research and development program supports armament enhancement initiatives, digital electronic technology, the new family of light helicopters, the integrated battlefield environment, and personnel and human factors technology, with balance among industry, universities and Army laboratories.

Exploiting Technological Superiority. The United States is recognized for having a clear technological lead in many areas which, if exploited, could greatly magnify the combat effectiveness of the Army. The introduction of night-seeing infrared systems, the development of the all-composite helicopter, laser guided and other "smart" munitions, are examples of such technologies. In 1981, The Army Science Board reported that U.S. high leverage technologies were not being adequately exploited and recommended increasing the emphasis in these high payoff areas.

The Army recently reorganized its Technology Base Management Team to provide intensive management and assist in accelerating the transition of high payoff technologies from the demonstration state to the field of combat. These high leverage technologies include:

-- Very Intelligent Surveillance and Target Acquisition to provide improved, near-real-time ground and airborne sensor fusion.

-- Distributed Command, Control, Communication & Intelligence to enhance communications and distribution of information to all levels of command.

-- Munitions that can, after being launched, acquire, select and guide a warhead to a target based on advances in fiber-optics, infrared electro-optics and radar technologies. Improved fuzes, warheads and delivery systems are also included in this initiative.

-- AirLand Battle Environment to provide information, based on terrain, atmosphere, environmental and other conditions that impact on effectiveness or utility of friendly and hostile weapon systems.

-- Soldier Machine Interface which uses a multi-disciplinary approach to assure that complex equipment is designed within the capabilities and limitations of the soldier to operate and maintain. A total systems approach is used to assure that the designated potential of weapons and equipment are fully realized when employed in the field.

-- Biotechnology to yield new vaccines, antidotes, chemical and biological detection systems and other means of preventing illness and reducing the effect of injury.

Modernization of Dugway Proving Ground. The Army is the lead service for developing and testing chemical warfare and chemical biological defense (CW/CBD) items. Dugway has been maintained at only a minimum operational capability as a result of other priorities and de-emphasis of chemical warfare. Insufficient personnel and funds have prevented Dugway from keeping up with the technological changes of the past decade. Immediate action is required to provide for test and evaluation of recent equipment developments. FY 86 will be the first year of full modernization in a program to upgrade test facilities, instrumentation, laboratory facilities, and housing to support the increased test workload for chemical warfare, NBC defense, and smoke systems.

Medical Defense Against Biological Warfare (BW). A vigorous defensive BW research program is necessary because of the indications that the Soviets maintain an active BW research and development effort and possess some BW weapons. The pulmonary anthrax epidemic in the Soviet city of Sverdlovsk, the use of yellow rain by Soviet surrogates in Southeast Asia, and recent reports that the U.S.S.R. has engaged in a greatly expanded toxin program are evidence of this. Another important factor is the long lead time required to develop prophylactic and therapeutic measures against BW.

The Army has tri-service responsibility for research on medical defense against biological warfare. Currently the Salk Institute, Swiftwater, Pennsylvania, is under contract to the U.S. Army Medical Research and Development Command (USAMRDC) to manufacture a limited number of vaccines. This facility is the sole dedicated vaccine production capability for the Department of Defense. In 1968 there were 36 manufacturers licensed to produce 385 vaccines. By 1983 that number had declined to 16 manufacturers licensed to produce 98 vaccines. Manufacturers are unwilling to undertake new developments because of inadequate market size, lack of profit, potential liability, and limited production factilities and personnel.

The FY 86 budget request will include an expanded effort to develop protection against toxins, altered organisms and endogenous bioregulators. Furthermore, work will continue toward development of several vaccines, antidotes, and a rapid identification diagnostic system against potential BW agents. It is anticipated that funds will be available in FY 87 to consider the feasibility for expanding the industrial base for the production of potential BW vaccines.

Tactical Robotics Demonstrator. This is a device to demonstrate state of the art capabilities in telemetric vehicle control, and the ability to plan and conduct robotic operations in reconnaissance and NBC detection. Development of a near-term robotic vehicle demonstrator, designed for future growth, follows recommendations of the Army Science Board and the National Academy of Science, and fulfills one of the top priorities of the Training and Doctrine Command AI/Robotics General Officers' Steering Committee. The Army demonstrator is designed to complement the futuristic Defense Advanced Research Projects Agency Autonomous Land Vehicle Program.

Alternative Energy. The Army is lead service for DOD's fleet and laboratory testing of methanol as an alternate fuel in administrative vehicles. Test criteria is being established and plans and milestones are being developed for operational demonstration and field validation testing. The program is scheduled to begin in 1985.

Artificial Intelligence. This is a field of computer science that utilizes software to aid or imitate human intelligence. Artificial intelligence enables machines to apply knowledge, learn, make decisions and communicate. Artificial intelligence has already shown potential for pay-off for the Army in areas such as surveillance, target acquisition, band width reduction, autonomous vehicles, navigation, multi-sensor fusion, terrain analysis, signal processing, speech command, display interfaces, tactical decision aids, image understanding, logistics support, training devices, medical applications, construction engineering, simulation, intelligent robotics, maintenance aiding devices, and advanced helicopters. Seventeen Army laboratories are conducting research into artificial intelligence applications for the Army.

ARAPAHO. The ARAPAHO system is a modularized container compatible system designed to quickly convert container ships to Vertical Take Off and Landing (VTOL) platforms and maintenance facilities The system was developed by the U.S. Navy. The Army is interested in examining the utility of the system to transport a limited number of helicopters and an Army Intermediate Maintenance capability in International Organization for Standardization containers. The helicopters and maintenance capability could be deployed from the leased vessel to perform Army ground-based missions and the support vessel could then be released for other missions. The Army will use FY 85 funds to further define the concept and to verify any requirement for this type of system.

WEAPON SYSTEMS TO MAINTAIN THE WINNING EDGE

Joint Surveillance and Target Attack Radar System (JSTARS) Program. The JSTARS Program will provide ground combat commanders the capability to locate moving and temporarily halted enemy targets well before they reach the close-in battle. Data obtained from JSTARS will be transmitted through a secure data link to multiple ground stations. The Army is developing the ground station part of this program and the Air Force the airborne portion. The Army and Air Force have agreed that the radar is to be mounted on the C-18 airframe with radar data to be used by both services. A contract was signed in August 1984 to begin Full Scale Engineering Development of the JSTARS ground station with a procurement start planned in FY 87. JSTARS will interface with the Maneuver Control System and TACFIRE to enhance battlefield management. JSTARS will also be able to provide target attack data for systems such as JTACMS.

Joint Tactical Fusion Program (JTFP)/All Source Analysis System (ASAS). The JTFP was established in 1981 at congressional direction. It combines Army and Air Force efforts to develop an automated tactical intelligence fusion and correlation system. The goal is a means of correlating and interpreting the massive volumes of raw intelligence data which floods into the tactical commander. The objective of the JTFP is to develop and acquire an Army system, the All Source Analysis System, and an Air Force System, the Enemy Situation Correlation Element (ENSCE), in a joint program which ensures the greatest possible commonality of hardware and software, and interoperability. The acquisition strategy for ASAS/ENSCE follows an evolutionary development approach. A small number of baseline systems will be fielded beginning in FY 86. These systems will employ off-the-shelf and minimum development hardware and software to achieve a limited functional capability in multiple operational environments. Then, through a series of preplanned product improvements and continuous software growth, the system will evolve to meet the full level of performance envisioned in the requirements documents. Development and fielding of the ASAS/ENSCE is critical to execution of the AirLand Battle.

Light Helicopter Family (LHX). The current Army fleet of helicopters, nearly 30 years old by the mid-nineties, are becoming expensive to operate and maintain and are tactically deficient for the AirLand Battle concept. The Light Helicopter family will be the Army's next generation rotorcraft. There will be two basic configurations, the first a scout/attack version (SCAT) and the second, a utility design. The LHX will be a lightweight, 8,000 pound class, highly reliable and easily maintained weapons system. Through maximum use of common dynamic components, the two LHX versions, SCAT and utility, will achieve a high degree of standardization and reduced support costs. The LHX will be able to operate around the clock, in adverse weather, and in hostile nuclear, biological, and chemical environments. The present acquisition strategy is for a competitive concurrent development of the SCAT and utility models by two LHX developers, leading to a fly off and competitive production.

Joint Tactical Missile System (JTACMS). JTACMS is a family of complementary weapons developed by the Army and the Air Force to hold at risk and engage enemy targets in the deep battle area. The Army portion of the program, the Joint Tactical Missile System, Army, will be an improved conventional weapon system with a missile to be transported and launched from the Multiple Launch Rocket System launcher. The system is designed to destroy, neutralize, disrupt, or delay enemy combat forces, beyond the range of available cannon and rocket systems, which are not yet engaged and which have an immediate or directly supporting impact on the close-in battle.

Mobile Protected Gun System (MPGS)/Armored Gun System (AGS). The light forces of the Army require an antiarmor assault capable weapon system that can be deployed strategically and tactically by existing aircraft. Currently the Army plans to use the M551A1 Sheridan with eventual improvements to include replacement of the current turret and gun with a new turret and soft recoil 105mm or 120mm cannon.

Advanced Antitank Weapon System-Medium. The Advanced Antitank Weapon System will be a man-portable weapon employed by the dismounted infantry at the platoon level to defeat current and advanced Soviet Armor. The system will replace the Dragon medium antitank weapon. It is currently in the conceptual exploration phase of development. Milestone decision review I is scheduled for February, 1985. The request for proposal has been approved and is ready for release as soon as system approval is given. Funding in FY 85 is $24.8 million and for FY 86 it is $81.1 million.

The Army Role in Space. The Army has had and will continue to have an active role in space policy and program development. The basic tenet of the Army space policy is to use space to support Army operations and Army operational elements. Space systems can increase the effectiveness and survivability of our military forces.

The Army is developing a comprehensive space policy, space master plan, and management structure to deal with space. As a first step, an Army Space Office has been established for closer coordination of Army space activities. It will become the focus for policy and guidance as the Army identifies and develops its role and its contribution to a unified space command. A small Army Staff field element has been established at the Air Force Space Command to help ensure a smooth transition to an Army portion of a unified space command.

The Army's traditional role as the land combat element of the National Security Team will be strengthened by efficiently utilizing the great potential of space-based and space-related activities for support.

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REFORGER

STEWARDSHIP OF THE FORCE

LEADERSHIP INITIATIVES

On December 7, 1981, the senior leadership of the Army announced the Total Army Goals. These goals are the foundation for the continued accomplishment of the Army's traditional mission: to deter any attack upon the U.S. national interests and, if deterrence fails, to engage and defeat the enemy in any environment. Implementation of the Total Army Goals has moved the Army toward strength and excellence. This year we added an eighth goal — training.

The Army leadership also establishes a theme each year which focuses our energy and attention. These themes do not lapse at the end of one year. They are cumulative. They are institutionalized in various programs and initiatives.

The 1981 theme was "The Spirit of Yorktown — The Spirit of Victory". The year concentrated on the spirit of Army service to the country. It focused on the great victory at Yorktown which ended the Revolution and ensured American Independence. The theme helped rebuild the Army's winning spirit.

The 1982 theme was "Physical Fitness." Army readiness begins with the physical fitness of the individual soldier, non-commissioned officer and officer. Soldiers who are physically fit are more capable of enduring the stresses of combat. Leaders who are physically fit are more innovative, more attentive, and certainly more productive. The Army launched the most comprehensive physical fitness program in the United States.

The theme for 1983 was "An Army of Excellence," a commitment which moved the Army from concern with quantity to the pursuit of quality. Emphasis was on excellence in all dimensions of Army life: personnel, doctrine, equipment, training, and readiness. Excellence is a combat multiplier, a lever to overcome the power of numbers on the battlefield. In an Army of Excellence people feel good about themselves. They enjoy a leadership climate in which all can perform, grow and develop to the full extent of their potential.

The "Army Family" was the theme for 1984. The American Army is a family of components, of units, and of people — a fraternal bond of mutual obligation. Initiatives of the Year of the Army Family are discussed throughout the Posture Statement. They demonstrate the Army's recognition that the welfare of the Army Family is a vital component of total readiness.

The achievements of these years did not just happen on their own, but resulted from challenges successfully met. Present in all these efforts is the hand of courageous, steady leadership. Leaders who met the challenges and turned them into opportunities. The leader is the lynch pin who ties all our themes together.

This year the Army theme is leadership. The Army is a unique leadership organization. Leaders are found at all echelons, from the squad leader to the Army Chief of Staff. When only two soldiers are present, one must step forward to take charge and assume the responsibility for directing their combined efforts. Leadership is the responsibility of every member of the Total Army.

This year we will focus all our efforts to make Army leaders the best possible. Ours is a dangerous world. Some 20 to 22 conflicts, from insurgency and terrorism to conventional warfare, are currently being waged . We expect to be outnumbered on any battlefield upon which we may stand. Ultimately it is the human spirit, responding to outstanding leadership, which will permit us to prevail.

The demands of modern war make the development of leaders in the art and science of battle more urgent than ever. The future battlefield will be characterized by greater time compression. It will be more complex and lethal. We will need to win the early battles decisively. Leaders must have the capacity for independent action in the islands of conflict that experience indicates will exist on the modern battlefield. Modern battle demands the synchronized movement of forces on the battlefield. This requires independent action by junior leaders in harmony with clear understanding of their commander's intentions. Units fighting in islands of conflict must be led by leaders so schooled in the tactics of their superiors that isolation will not break their will, but steel their resolve to carry on without detailed orders.

All soldiers must be given the tools to become leaders. We must teach them what they need to know. We must provide them the opportunity to practice leading others. Training must be challenging and rigorous. All Army leaders must create an environment that reinforces values and encourages soldiers at all levels to seize the initiative and act creatively. Leaders at all levels are obliged to demonstrate technical and tactical competence and the highest qualities of personal conduct. Well planned and executed training is at the heart of the command climate. The environment established by the commander must allow all soldiers to realize their full potential. The entire professional development process must yield individual soldiers capable and willing to lead our Army in accomplishing its mission.

It is the responsibility of the individual soldier to become both tactically and technically proficient to carry out his or her battle tasks. Every soldier must drill in those tasks so that his or her performance becomes automatic and spontaneous. The battlefield demands action — proper disciplined action. Disciplined soldiers bring cool resolve to the chaos of the battlefield.

A soldier must be a professional with the spirit of one prepared for war — the warrior spirit. The warrior spirit enables leaders to inspire confidence and an eagerness to be part of the team, to accept the responsibility to protect the nation and to develop the skills to meet the challenges of war with unfaltering will. The warrior-soldier is skilled in the use of weapons, tactics and fighting organizations. He or she is prepared physically and mentally to lead organizations to fight and support in combat. A professional soldier is able to analyze the situation, be bold, to take action, to accomplish the mission.

Leadership is not limited to soldiers. In the Total Army, leadership within the civilian support force complements leadership on the battlefield. Supervisors who effectively guide and motivate employees, and employees who seek ever better ways of doing business are integral to the environment the Army is working to build.

MANAGEMENT INITIATIVES

The Army appreciates previous congressional actions which resulted in the allocation of the resources which form the basis for the Army's strength and readiness. We are very attentive to today's imperative that Army managers not only strive to achieve maximum effectiveness, but that we also focus on improving the efficiency of our operations to give the American taxpayers maximum value for their dollars.

Four key areas of management emphasis for the Army of 1985 are:

1. Weapons systems acquisition processes.

2. Force modernization and integration.

3. Resource management.

4. Information management.

ACQUISITION

Based on a set of actions put in motion by a former Deputy Secretary of Defense the Army has made numerous management improvements that provide today's solid foundation for rational acquisition actions. Earlier sections of this Posture Statement described specific accomplishments in meeting our goal of providing the American soldier better equipment than his enemy. Other highlights of improved acquisition management include:

Contracting. Providing timely and efficient contracting support is an essential element in the Army's ability to acquire technologically superior weapons systems at a reasonable cost. The Contracting and Production Directorate, Office Deputy Chief of Staff for Logistics, has been formed to provide much needed guidance, direction, and assistance to more than 240 Army contracting offices and to enable HQDA to develop management information systems, policies, procedures, and methods necessary for effective and efficient contracting operations. The Directorate will be fully operational in mid-1985, at which time it will be capable of providing assistance whenever needed on all facets of contracting.

Quality Assurance. Fielding increasingly sophisticated weapons systems as part of the modernization effort calls for an improved Product Assurance capability. In FY 84, the number of quality and reliability engineering interns doubled over previous years. The position of Product Assurance Director at four major subordinate commands was elevated to Senior Executive Service level and all deputy project managers and product assurance directors are being trained in reliability growth management. The Army is conducting independent reviews of contractor productivity, quality, and cost performance. We are emphasizing quality involved in acquisition management, and aggressive management of quality costs. We are ensuring that problems are solved before entering production.

Domestic Technology Transfer. The Army's Domestic Technology Transfer Program is managed at Army Materiel Command. This program involves all 35 Army laboratories in positive efforts to identify appropriate technologies which may have some civilian or industrial application. Semi-annual meetings of representatives of all labs are organized by Army Materiel Command to coordinate Army activity. The Army Materiel Command coordinates all of this activity with the rest of the federal government and with industry, and it participates in the Federal Laboratory Consortium for Technology Transfer. The cost to benefit ratio is impresssive when it is realized that every citizen enjoys a continually improved quality of life from many spin-offs.

Displaced Equipment. The Army recently implemented a new Equipment Redistribution Policy for major items replaced by force modernization equipment. This policy places redistribution responsibility on item managers and relieves the retail system of responsibility for directing redistribution of displaced equipment. This procedure was implemented to relieve the soldier from this burden and to ensure that the highest priority unit receives the displaced equipment.

RESHAPE Productivity Program RESHAPE is the Army's comprehensive program for planning, executing, and reporting all initiatives and programs to expand output, improve efficiency and encourage and implement long term productivity improvements and savings. Today, the emphasis of RESHAPE has shifted to two major themes: investment in long range productivity equipment and systems, and development of an auditable system to track savings in the budget system. During FY 84 the Army integrated the DA/OSD Productivity Capital Investment Program into the RESHAPE Productivity Program to maximize funding opportunities, reduce confusion, and provide economies in funding and executing projects. The central goal of the improved tracking system is to accurately reflect savings as an offset to requirements in the budget.

MIRAC Hot Line. The Catalog Data Activity's Management Information Assistance Center (MIRAC) has a hot line to assist customers who use its products and services. The hot line mission has been expanded to include being the center for unit price error reporting. Anyone suspicious of a unit price in the Army Master Data File (AMDF) can call the hot line for assistance. In a six month period the hot line resulted in 489 challenges and 262 price changes, representing a savings of $398,904.

Optimizing Audit/Investigative Findings: The Army is optimizing application of audit findings. The Army Materiel Command receives a daily audit information update. The initiative to develop an Audit Alert Network and forward audit trend information will alert commanders to problem areas.

Quality Circles. The use of this initiative within the Army Materiel Command has increased to the extent that these groups of enthusiastic employees can now be found in all types of mission areas. This initiative blends team building and group dynamics with analysis techniques, and is successful both in improving productivity and developing people. Presently over 400 circles, with a total membership of approximately 3,500 people, are located through Army Materiel Command.

MODERNIZATION AND INTEGRATION

As the Army's Research, Development, and Acquisition Program comes to fruition—as the tanks, guns, aircraft, and other devices described in earlier sections come off the assembly lines—the Army faces another series of management challenges. We are now engaged in the greatest modernization effort in the Army's history. This requires skillful management to ensure the integration of new equipment, the transfer and rehabilitation of the displaced equipment, and many other related actions. Highlights of this process include—

The U.S. Army Development and Employment Agency (ADEA). The Army Development and Employment Agency, located at Fort Lewis, was chartered in September, 1983, as a field operating agency of Headquarters Department of the Army. It replaced a High Technology Test Bed (HTTB). ADEA's mission is to identify, evaluate, and expedite operational concepts, organizations, and materiel requirements which improve the combat power, deployability, and sustainability of all Army divisions. Orginally ADEA concentrated on light forces. However, recently its mission has been expanded to include heavy, special operations, and low intensity initiatives. ADEA acts as the Army innovation leader where new concepts, high technology equipment, and innovative tactics are explored. To accomplish this mission, ADEA is organized in force development, test and evaluation, operations support, resource management, and command and control elements. It is supported at Fort Lewis by the Army's Training and Doctrine and Materiel Commands, Air Force, and Marine Corps liaison elements.

RESOURCE MANAGEMENT

The System. The Army's resource management system consists of four distinct, interdependent, and interrelated parts: the Plan, the Program, the Budget, and the Execution of that budget. There are numerous ongoing management resource initiatives and plans for the Army in 1986. Army commanders are using innovative approaches to meet the resource challenges associated with a fixed military end strength and limited manpower and dollar resources. One such approach is a new proposal for financing the construction of facilities to support the final decision to station the Army's new, 10th, Light Infantry Division at Fort Drum, NY. All of these innovations support force structure, training, and modernization and they involve people, money, materiel, facilities, information, and time. The unifying theme of Army management is its focus on a single objective—improved readiness.

Resource Management System Development and Integration. A key initiative in Army resource management is the establishment of an output-oriented resource management system that links our program and budget actions and provides feedback (both financial and performance data) to those parts of the management system. Creating this system requires us to develop and implement a logical program management structure that mirrors the way the Army does its business. Program and budget decisions will be based on Army military unit structure for each year, supported by weapons systems acquired and fielded in earlier years and the Army-wide supporting mission activities and installations. Using this structure will allow us to establish the necessary balance between our force structure objectives and our weapons deliveries, between stationing plans and installation support requirements, and between tactical and non-tactical mission activities. In addition to providing a stronger framework for the definition of program goals and budget relationships, this structure will support a methodology to link feedback from the actual program execution in both financial and operational terms. We will define our objectives more clearly and, then, be able to evaluate the quality of our execution.

Standardization of Installation Organizations. During 1985 the Army will begin conversion to a standard installation organization (SIO) structure for the garrisons which operate Army installations. This standardization will improve our mobilization capability, provide a better capability to deliver services to our people, provide for better management of installation support, improve the competitive position of the Army's "inhouse" work force during cost comparisons with the private sector, and improve our ability to administer contracts at the local level. The SIO is the basis for the initial development of the foregoing output-oriented resource management system.

Model Installation Program. The Army has designated eight installations (Fort Sill, OK; Fort Polk, LA; Hanau and Neu Ulm Military Communities in Germany; Anniston Army Depot, AL; New Cumberland Army Depots, PA; Aberdeen Proving Ground, MD; US Army Support Command, HI) as "Model Installations," to serve as "test beds" for deregulation and decentralization of authority. Key features of this program are that higher headquarters will generally waive regulations and encourage "cutting red tape" so the model installation commanders and their managers can have rather "free rein" to improve their operations. As an incentive to participants, any savings generated are to be retained and reapplied at the model installations to make them better places to work and live.

Commercial Activities (CA) Program. This efficiency program compares the costs of government "in-house" operations providing commercial-type services to the costs for similar services provided by private companies. The purpose of the program is to acquire the best services at the least cost through competition between the government work force and private companies. During FY 84, 55 CA cost studies were completed, involving 2,234 civilian and 364 military spaces. From these studies, 964 civilian and 351 military spaces were released by contract replacement and reapplied to high priority Army missions. In FY 85, the CA Program's results will continue to grow, as cost studies begun in FY 82 and 83 (covering more than 7,000 personnel) are completed.

Army Performance Oriented Reviews and Standards (APORS) Program. In FY 84, the Army initiated this program to conduct efficiency reviews of non-deployable activities that would not be reviewed in the CA Program. The first year results showed savings of 989 spaces and $29 million.

Defense Regional Interservice Support (DRIS) Program. In this logistics efficiency program, which provides - DoD wide - $1.5 billion of goods and services, the Army continues to promote management effectiveness and to consolidate or eliminate functions to reduce base operations costs. As of 30 September 1984, the Army participated in a total of 6,392 DRIS agreements. Since 1978, budget and avoidance savings accrual is $144.1 million (as of September 1984). "Avoidance savings" in the DRIS Program only began to be documented in FY 83. Savings have increased, as the Army's effort has been expanded to record the economic savings associated with both existing and new intra-Army retail and interservice wholesale and RDTE agreements. Army performance in FY 84 captured 80% of all DoD savings and was an 800% improvement over 1983.

Productivity Capital Investment Programs. These programs include the Quick Return On Investment Program (QRIP), Productivity Enhancing Capital Investment Program (PECIP), and OSD Productivity Investment Funds. Under the Productivity Capital Investment Programs, "seed money" is set aside for fast payback capital tools, equipment and facilities that save manpower, reduce costs, increase productivity and improve readiness. By providing modernized equipment and facilities through these programs, organizations are better managed and supported. In addition, soldiers are trained with state-of-the-art equipment, leading to a more ready force. Army commanders are vigorously pursuing these programs as a way to improve their resource utilization and the overall readiness of the Army. Army savings reported in the FY 86 OSD Budget Submission for FY 84-90 are $1.2 billion. The savings result from funds invested or programed prior to FY 86 from a portion of the Army budget dedicated toward fast payback projects. Savings continue to increase as a result of maturing projects and as more funds are added.

Value Engineering (VE) Program. The Army VE Program is currently producing more than $400 million in net annual savings and cost avoidance. As a result of the introduction of VE programs in the Training and Doctrine Command and the Forces Command in FY 85, and the increased emphasis on VE regarding spare parts and contractor-developed VE Change Proposals, net VE savings are targeted to reach $600 million by the end of FY 86. The Army's VE Program has an extremely high (20:1) return on investment. Private sector contractors help us in this program through the "VE incentive clauses" in their contracts. These clauses allow contractors to share in the net savings resulting from VE Change Proposals submitted on Army contracts.

Finance and Accounting. Finance and accounting within the Army is undergoing extensive change, from both the doctrine and systems standpoint, to save personnel by automating labor-intensive functions; provide more timely and accurate management information to formulate and track planning, programing, and budget decisions; and improve financial service to soldiers and their families. Actions include:

o Active Army Pay - Automation of manual processes to enable reassignment of 500 military personnel from clerical duties to combat missions.

o Reserve Pay - Institution of "positive" drill attendance pay systems to eliminate potential for fraud and to improve pay service to Reservists. Improve organizations and systems to assure accurate and timely pay service to all Reserve Component soldiers.

o Accounting - Redesign of accounting systems to better formulate, justify and manage resource requirements, and to more accurately track planning, programing and budget decisions.

o Personnel Financial Readiness - Encouraging more soldiers to have their pay checks sent to banks and credit unions so that their families will have access to financial support in the event of unexpected deployments. Assuring that adequate check cashing service is provided to soldiers and that adequate banking services are available to support sure pay.

o Internal Controls - The Army has developed, and is implementing throughout the Army, an effective system of internal controls. The Army's internal control program is designed to ensure compliance with the Federal Managers' Financial Integrity Act. Our system is designed to take advantage of the Army's existing, extensive body of regulatory guidance; thereby causing the least amount of disruption in day-to-day operations.

Independent Cost and Economic Analysis. The Army's Cost and Economic Analysis Program is designed to improve the resource management process by linking planning and programing through cost estimates and improving the cost estimating process in general. This major program has been given management emphasis through the creation of the US Army Cost and Economic Analysis Center as a field operating agency of the Comptroller of the Army. The Cost and Economic Analysis Center has been designed as a center of cost estimating and analysis excellence. It will maintain and improve cost credibility for Army programs.

Economies, Efficiencies, and Management Improvements (EEMI). This program identifies and documents management actions and initiatives that improve the efficiency and effectiveness of Army programs, operations and systems. The FY 86 Budget documents $14.7 billion in savings to be realized through FY 90. This is a 30.1 percent increase since the FY 85 Budget.

Multiyear Procurement. One of the principal initiatives under the EEMI Program is multiyear procurement. Multiyear procurement provides significant benefits for the Army. The expanded multiyear authority, provided in the FY 82 DOD Authorization Act, permits the use of advance procurement funds for economic order quantity (EOQ) procurement. EOQ procurement is the purchase of material for future-year production ~~quantities~~ of items not required by procurement lead times but desirable for economic reason. The Army initiated three EOQ multiyear contracts with FY 82 funds and seven EOQ contracts with FY 83 funds. There were no EOQ multiyear contracts with FY 84 funds. The savings are depicted in the following Table.

There were no EOQ multiyear contracts with FY 84 funds. The savings are depicted in the following Table.

FY 82 FUNDS	($M) Savings
BLACKHAWK	81.1
MI-Fire Control	131.1
ALQ-136	34.6
TOTAL	246.8

FY 83 FUNDS	($M Savings)
M60 TTS	76.8
BFVS (Components):	
Transmission	9.2
Turret Drive	9.7
Power Control Unit	14.8
TOW subsystem	85.0
T700 Engine	75.1
MLRS	209.1
TOTAL	497.7
GRAND TOTAL	726.5

TABLE 3.22

The Army plans to award four EOQ multiyear contracts with FY 85 funds and four more with FY 86 funds.

Defense Acquisition Improvement Program (DAIP). Complementing the Army's efforts in the EEMI Program is the Defense Acquisition Improvement Program (DAIP). Among the more significant outgrowths of the DAIP are efforts to strengthen the industrial base and to require specific definition of acquisition strategy earlier in the materiel acquisition process.

The Army has also initiated actions to stabilize the acquisition process, including risk review and funding, and development of a program management control system to document details of acquisition plans, costs, and requirements for management control. Most recently, the Army has pursued a program of integrating weapon systems costing with programming and execution management. Cost can then be tracked from the initially designed system requirement to the final acquisition program and, if required, to the Selected Acquisition Report.

INFORMATION MANAGEMENT

On May 9, 1984, the Chief of Staff approved the establishment of an Information Mission Area (IMA), the creation of a new Army Staff agency, the Office of the Assistant Chief of Staff for Information Management and a field operating agency, the United States Army Information Systems Command. These actions initiated an Army information reorganization.

The purpose of these decisions was to integrate the five major disciplines of information, communications, automation (to include office automation), audiovisual, records management and publications; provide them with centralized management and direction; and ensure a better return on investment. The concurrent realignment of functions and organizations also has the potential to produce further management efficiencies through the more effective management of information. The goals of this realignment are to create continuity of information management from the lowest to the highest levels of the Army and to ensure the capability of an orderly transition of command management in time of war.

The highest priority information mission is the creation and dissemination of the Army's information architectures and the body of standards and policies that support it. Another initiative is the establishment of an Information Planning process that brings together and aligns the tactical, strategic, and sustaining base spheres of information, and translates information requirements into the programming, budgeting, and budget execution process. Our first plans are due on 1 July, 1985. These will form the basis from which the Army's architecture will be constructed.

With an information architecture and management structure in place to provide centralized direction and control, the Army can be proactive in embracing applications of new technology in the information area. Examples are the application of artificial intelligence in support of force modernization management initiatives, and the introduction of supercomputers to "order" the mass of analytical and computational data requirements.

The new Army information agencies and the developing information management activities at all levels, in all commands, agencies, and activities represent the organizational infrastructure that will give the Army the ability to centrally manage and decentraly execute its integrated information management program.

SECURITY ASSISTANCE

Security Assistance (SA) Program. Through security assistance, the Army trains and equips allied and friendly ground forces so that they are able to perform their stated defense role in coordination with U. S. forces. A recent Army study shows SA programs contribute to U.S. exports, provide for a more favorable balance of payments, and create greater employment. SA programs also support growth of the U.S. Gross National Product and generate much needed tax revenues for the government. New business for the FY 84 program amounted to $3.8 billion for the equipment and services. Fourteen countries in the Asia/Pacific region accounted for $512 million of this total; $591 million is attributed to 24 countries in the European area compared to the $2.7 billion expended by 37 Mid-East/Africa/Americas countries. The largest ongoing Army program is with Saudi Arabia and amounts to $23.6 billion. Other large ongoing programs involve Israel - $2.3 billion, Egypt - $2.4 billion, Jordan - $1.3 billion, Taiwan - $1.4 billion, and Germany - $1.0 billion. These six country programs comprise more than 75 percent of the Army's open program value. The Army SA Program is a completely reimbursable program and does not have an impact on the FY 86 budget.

Poor worldwide economic performance and high interest rates on existing Foreign Military Sales (FMS) loans have caused financial difficulties among SA customers. During the last two years, the Army increasingly has become aware that more and more potential SA recipients are unable to pay for Army equipment and training at current interest rates. Increased funding for equipment and training through grant aid, as well as concessionary terms for FMS credit financing, are needed if the Army is to properly implement the concept of collective security. Congressional support of such funding is needed.

In line with the Army's wish to help friends and allies to carry out their responsibilities in collective security, the Army will submit to the 99th Congress a legislative initiative that would authorize the exchange of training and other similar services with friendly foreign nations and international organizations without monetary reimbursement when the nation or organization benefiting from these services provides similar training or related services of an equivalent value to units or personnel of the U.S. Armed Forces. Passage of this legislation would strengthen collective security, international cooperation, and mutual understanding by providing foreign countries and international organizations greater access to U.S. training and related services. Many countries and international organizations which cannot now afford to pay in cash could reciprocate in kind with services of equivalent value. Further, this proposed legislation would eliminate the need for cumbersome reimbursement transactions. Moreover, the reciprocity provision would facilitate, on a cost-free basis, continued U.S. access to essential foreign training and support facilities.

The Special Defense Acquisition Fund (SDAF) directly supports the SA Program. The SDAF, authorized by the Arms Export Control Act in December 1981, finances the acquisition of defense articles and services from FMS recoupments in anticipation of their transfer to foreign governments under a SA Program. Previously, the services were precluded from buying in advance for security assistance as this would require use of appropriated funds. Consequently, there was no way to satisfy short lead time requests other than by drawdown or diversion of Army inventory. The Army has fully supported the SDAF program, having received about 70 percent of the total DOD program in past fiscal years. Continued emphasis will be placed on SDAF to acquire higher funding levels in order to expand the range and depth of items in the SDAF inventory.

Within SA, the International Military Education and Training Program (IMET) is an extremely cost-effective method of providing the opportunity for influencing other countries to adopt policies which enhance U.S. security interests. IMET is of particular importance due to the great value of the personal relationships that are developed between U.S. military personnel and the military personnel of foreign countries. This program fosters an appreciation and understanding of the U.S. democratic process, philosophies and ideals. For FY 86, the Army expects 7,500 students from 115 countries (2,500 under grant aid and 5,000 under FMS). Many of the foreign students are potential leaders and managers in their countries, therefore, the potential for future influence on their governments exists. IMET also contributes to cooperative military relationships with countries which have common security interests with the United States. It advances the efficiency, professionalism, and readiness of recipient military forces and increases standardization of military equipment, doctrine, and strategy. In this connection the Army would like Congress to pass another legislative initiative that would allow the exchange of students between the United States and foreign countries at military schools (except military academies) on a cost free, reciprocal basis. This initiative was submitted to Congress in FY 84 but was not passed.

SECTION V: SUMMARY – BUDGET ASSESSMENT

We are proud of the Army's significant accomplishments cited in the preceding sections of this statement. We are optimistic that our FY 86 budget request will produce further essential improvements in the Army. To that end, the FY 86 budget request supports improvements and initiatives which will ready the Army to react fully and flexibly to divergent worldwide threats to our national interests. An examination of the budget request in terms of specific readiness objectives is provided below.

Our first budget objective is Force Structure. The Army has several major force structure initiatives which are aimed at improving the strategic deployability and effectiveness of the Army's combat divisions, both heavy and light, and the support forces needed to provide staying power. Heavy forces are converting to a more modern design which improves their affordability and achieves greater efficiency by combining functional and organizational capabilities at the appropriate echelons. The light division initiatives address the need to provide a more rapidly deployable force to meet the increasing threat at the lower end of the spectrum of conflict. All Active Component force structure initiatives are accomplished within a fixed end strength.

The FY 86 budget provides for the continued modernization of the heavy divisions through conversion to Division 86, and the further implementation of light infantry initiatives as the Active Component 6th Infantry Division and Army National Guard 29th Infantry Division begin activation. The 10th Mountain Division continues its activation sequence. The 9th Infantry Division completes transition to the High Technology Motorized Division design. Other force structure actions include further enhancement of Special Operations Forces, and further steps to restructure Army aviation assets. The end result of these initiatives, which will continue for several years, is improved combat power and a total force with a balanced mix of heavy and light divisions responsive to a variety of threats.

During FY 86 the Army will continue to implement the activation of the 10th Mountain Division at Fort Drum. In December 1984 the Army decided to make the provision of family housing the pacing factor for adjusting the activation schedule of the 10th Division. In order to expedite construction of both facilities and housing, Army is seeking legislative approval of an innovative plan to use private sector financing and construction in the building of Fort Drum. Under this plan the brunt of construction will commence in FY 86. Because of the high priority given to Light Infantry Division initiatives the Army budget contains alternatives which will allow Fort Drum improvements to support the stationing of the 10th Mountain Division.

Since the Army depends on people to accomplish its mission, our second budget objective is manning the Total Army with sufficient numbers of competent people to accomplish the Army's mission. The resources requested to support the Army's manpower requirements are designed to carry on the recruiting and retention successes experienced in FY 84. In view of the sophisticated equipment scheduled to enter the force during the next five years, and the increased probability of small unit independent actions, the accession of quality soldiers is essential. Dollar resources are provided to support an Active military end strength of 780,800 as well as continued growth of the Reserve Components.

We have placed added emphasis on improving the living and working conditions of our soldiers and their family members. The $900 million increase in quality of life initiatives is, in part, directly attributable to the 67 issues developed in The Army Family Action Plan. This plan, coupled with the validation of the quality of life standards, will serve as the basis of continued program growth through the out years. The FY 86 budget contains $6.3 billion in support of the quality of life program. Quality of life categories include family programs ($1,899 million), community construction ($1,067 million), facility maintenance and repair ($2.911 million), chaplain activities ($15 million), drug and alcohol treatment and prevention ($22 million), community morale, welfare, and recreation services ($284 million), and unaccompanied personnel housing operations and furnishings ($106 million). These quality of life programs have a direct and positive effect on increased readiness and retention levels. Funding for the FY 86 budget request will enable the Army to maintain prior improvements and close the parity gap with the civilian sector.

Our third budget objective is training. Well-trained soldiers, crews and units are essential if the engineering potential of new hardware is to be transformed into an increased combat and force capability. The FY 86 budget sustains the FY 85 programs and initiatives, while targeting several key areas for expansion. Driven by force modernization and new Airland Battle training requirements, the FY 86 Range Modernization Program is the most extensive yet. The Flying Hour Program moves closer to meeting full crew and unit combined arms training requirements. In an effort to hold down operations and ammunition costs while increasing individual proficiency and unit training readiness, the funding request for devices, simulators and simulations — both system and non-system — remains near the record FY 85 level. Light Force Training initiatives retain their high priority. The National Training Center continues to support 28 battalion task force rotations annually to include Army National Guard participation. Realizing that increasing operational demands placed on the RC require an optimal utilization of time and resources, several new initiatives seek to increase RC training effectiveness. Programed improvements in the officer and noncommissioned officer education systems continue while unit field training activity remains near the FY 85 operating tempo.

Our fourth objective is to modernize the Total Army. The Army has accelerated the equipment modernization program of the Reserve Component enabling its units to train, and if necessary, fight with equipment equal to that of the Active Component. In FY 86, $1.4 billion worth of equipment will be issued to the Army National Guard and Army Reserve. Of greatest significance Army initiative is the accelerated modernization of the Reserve Component tank fleet with the M1 or M60A3 tank, the complete upgrade of air defense units with ROLAND, Chaparral, Improved HAWK, Stinger, and the modernization of attack helicopter units with AH-1S TOW Cobra or AH-64 APACHE. Modernized battalions for FY 86 include the 1-108 Armor Battalion (GA ARNG) equipped with M1 tanks and ten other battalions upgraded with M60A3 tanks. Air Defense modernization includes equipping the 4-200 AD Battalion (NM ARNG) with the Chaparral air defense system. In FY 86 RC Aviation Battalions will be equipped with an additional 77 AH-1S Attack Helicopters as a part of the Army's aviation restructure program. This initiative to accelerate modernization of the Army National Guard and Army reserve will enhance the combat capability of the Total Army.

We must ensure that modernization initiatives for both the Active Force and Reserve Components remain complementary. In FY 86, 14 battalions will be modernized as a result of major weapon system changes. The Army will issue UH-60 BLACKHAWK Helicopters to three combat aviation battalions; Bradley Fighting Vehicles to four mechanized infantry battalions and the M1 Abrams tank to seven armored battalion/cavalry squadrons.

The FY 86 budget attempts to balance force readiness with weapon and equipment modernization. $26.6 billion is devoted to eliminating shortages in existing equipment and servicing future readiness through the research, development and acquisition of new equipment. In addition $.2 billion is programed to improve Medical Readiness through the purchase of major medical equipment items and sets for Deployable Medical Systems (DMS).

The nuclear, biological and chemical defense readiness posture will be improved by funding individual chemical defense equipment, biological and chemical detecting devices, and decontamination equipment.

Funds are also included for procurement of critically short combat service support equipment such as fuel and ammunition vehicles, material-handling equipment, mobile automatic data processing equipment and generators. Despite the magnitude of the budget, major shortages still exist for supporting systems and equipment to include: battlefield recovery, ammunition handling and distribution, petroleum distribution and war reserve stocks.

Our fifth budget objective addresses the need to equip, mobilize and deploy a force of sufficient size in a timely manner to influence the early stages of conflict. Individual clothing and equipment required for mobilization training base expansion continues to be funded in FY 86 moving the Army gradually toward the capability to outfit all of its trainees during the first 90 days of mobilization.

The FY 86 budget also includes funding for layaway and maintenance of reserve standby industrial facilities which are critical to wartime production.

While some progress has been made in improving the posture of war reserve stocks, much more needs to be done. Because the industrial base is incapable of significant contribution in the early phases of an emergency, it cannot be considered a substitute for our war reserves. Therefore, the FY 86 budget provides for additional days of supply of major and secondary items and ammunition.

ANNEX A: BUDGET OVERVIEW

APPROPRIATION OVERVIEW

The level of resources we are requesting for FY 86 is essential to the long-term success of our readiness and modernization programs. A lower level would not only raise the total cost of certain programs due to delays, stretch-outs, and termination, but also would upset the balances we have built into the Army Programs.

The Army budget shown in TABLE 5.1, proposes $82.0 billion in total obligational authority (TOA), which requires budget authority (BA) of $81.7 billion and outlays of $74.0 billion.

DEPARTMENT OF THE ARMY
BUDGET COMPARISON
($ in Billions)

CURRENT DOLLARS

	FY1984*	FY1985	FY1986
TOA	68.8	74.7	82.0
BA	68.7	74.4	81.7
Outlays	55.7	65.6	74.0

CONSTANT FY 1986 PRICE

			84-85		85-86
	FY1984*	FY1985	REAL GROWTH	FY1986	REAL GROWTH
TOA	74.4	77.6	4.3%	82.0	5.6%
BA	74.3	77.3	4.0%	81.7	5.7%
Outlays	60.3	68.1	13.0%	74.0	8.8%

* Adjusted for Army's share of Retired Pay

TABLE 5.1

FY 84 totals represent actual obligations and expenditures. FY 85 data represent the current year budget as appropriated by Congress, $73.8 billion, plus a pay supplemental request of $.9 billion for the pay raise effective 1 Jan 85 and for the proposed 3% military pay raise to be effective 1 Jul 85, and reprogramming actions that were submitted to Congress. The FY 86 request includes $78.2 billion before the Defense Subcommittee and $3.8 billion before the Military Construction Subcommittees.

ARMY BUDGET MIX

The Army's FY 86 budget request continues the initiatives started three years ago to modernize our forces. In Table 5.2 below the cost of maintaining the Army chart shows the percentage and budget dollars of the Army budget devoted towards Military Personnel (including military retired pay), Operation and Maintenance, and Investment accounts.

Military Personnel budget includes $28.5 billion in TOA to pay our military personnel. This represents an increase of 1.5% in real terms over the FY 85 level, which is necessary to provide improved benefits to our soldiers and to strengthen the full time manning of our Reserve Components.

Operation and Maintenance appropriations continue the steady improvement in the operation and support of our forces, which in turn, enhances readiness and sustainability. The FY 86 budget includes $24.2 billion which represents an increase of 7.6% in real terms over the FY 85 level. The FY 86 budget major thrusts are in continued force modernization, training (individual and unit), reducing Depot Maintenance backlog, and the backlog of maintenance and repair of facilities.

Investment appropriations will rise by 8.3% in real terms in FY 86. It is essential that we maintain the momentum we achieved in our modernization program by ensuring that our newly developed equipment is produced at an economical production rate and take maximum advantage of business decisions.

COST OF MAINTAINING THE ARMY
FY 1986
(TOA IN BILLIONS)

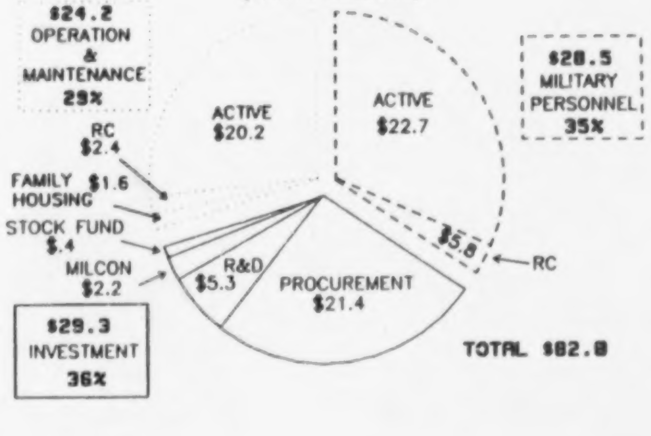


TABLE 5.2

BUDGET HIGHLIGHTS

This budget capitalizes on force multipliers that are comparatively low in cost yet high in combat leverage. We seek to augment muscle with agility by:

- Activating an 18th Active Army Division (the 6th Infantry Division) in new light design without increasing the Active Army end strength by converting an existing Active theater defense brigade and a reserve component separate Infantry Brigade in a Roundout role.

- Activating a 10th Army National Guard Division (the 29th Infantry Division) also in the new light design from existing separate Infantry Brigades and activation of new units.

- Converting a second Infantry Division to new light infantry design.

- Converting the Air Assault Division to a new design.

- Continuing transfer of Active Component mission to Reserve Component and increasing Reserve full time support.

- Continuing the conversion of an infantry division to the High Technology Motorized Division design.

- Continuing conversion of 14 heavy divisions to a refined Division 86 design.

- Improving readiness through increased manning levels and quality of the soldier:

    -- Raise Army National Guard end strength from 438K to 450K.

    -- Raise Army Reserve end strength, including Individual Mobilization Augmentees, from 286K to 301K.

    -- Hold Active Army end strength approximately to the FY 85 level, while continuing to bring high quality non-prior service personnel into the Active Army, Army National Guard, and Army Reserve.

    -- Increase enlistment and reenlistment bonuses as unemployment falls and youth population declines.

    -- Provide additional primary and basic technical courses for non-commissioned officers.

    -- Provide resources for expanded officer basic courses and the combined arms services staff school.

- Improving Readiness through enhanced training and increased flying hours.
- Maximizing the use of state-of-the art, high technology systems.
- Increasing readiness through modernization:
  - M1 Abrams Tank
  - M2/M3 Bradley Fighting Vehicles
  - AH-64 Apache Helicopter
  - SINCGARS Radio
- Improving the Army National Guard and Army Reserve equipment status.
- Improving Reserve Component Combat Service Support capability.
- Improving facilities which are our foundations for defense:
  - Provides over 21,000 additional barracks spaces and 2,000 new family housing units.
  - Provides facility support for critical weapons systems such as: Binary Chemical Weapons, PATRIOT, AH-64 Attack Helicopter, MLRS, and M-1/2/3 combat vehicles.
- Improve Force Sustainability.
- Innovative Investment Strategies (LHX, MSE, MYP)
- Strong Emphasis on Soldier and Family Support.

Today, the Army is much more capable of meeting potential requirements than it was in 1980. The budget increases provided in FY 81 through 85 accelerated programs to eliminate decade-old deficiencies. Much remains to be done; For example, 37% of the maneuver battalions in Europe still have motor pools in the mud. If the increases requested for FY 86 are provided and if the momentum of improvement can be sustained, the capabilities of the Army can be aligned more closely with the demands of the national strategy. We also can have an Army that is housed and equipped commensurate with the high quality of the personnel now choosing an Army career.

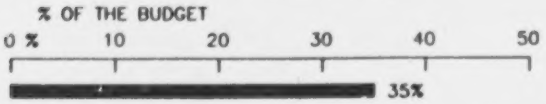
The following tables summarize the Army's FY 86 budget by appropriation. The tables may not add due to rounding.

ARMY BUDGET
($ in Millions)

	FY 84* ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Military Personnel:	18,517	26,725	28,537
Retired Pay Accrual	-	(6,762)	(7,139)
Military Personnel, Army	15,348	21,725	22,712
Retired Pay Accrual	-	(5,468)	(5,640)
National Guard Personnel, Army	1,848	2,909	3,431
Retired Pay Accrual	-	(763)	(898)
Reserve Personnel, Army	1,322	2,091	2,394
Retired Pay Accrual	-	(532)	(602)
Operation and Maintenance:	19,208	20,777	22,576
Operation & Maintenance, Army	17,306	18,604	20,191
Operation & Maintenance, Army National Guard	1,177	1,439	1,605
Operation & Maintenance, Army Reserve	692	733	780
Army Family Housing	1,234	1,332	1,611
National Board for the Promotion of Rifle Practice	1	1	1
Investment:	23,320	25,879	29,282
Procurement	17,409	19,376	21,366
Aircraft Procurement, Army	(3,237)	(3,901)	(3,893)
Missiles Procurement, Army	(2,840)	(3,158)	(3,387)
Weapons & Tracked Combat Vehicles Procurement, Army	(4,696)	(4,548)	(5,739)
Ammunition Procurement, Army	(1,980)	(2,646)	(2,635)
Other Procurement, Army	(4,656)	(5,122)	(5,713)
Research, Development, Test and Evaluation	4,215	4,376	5,280
Military Construction	1,306	1,761	2,194
Military Construction, Army	(1,184)	(1,593)	(2,021)
Military Construction, Army National Guard	(68)	(99)	(102)
Military Construction, Army Reserve	(55)	(69)	(71)
Stock Fund	389	366	442
Stock Fund War Reserve	(242)	(210)	(285)
Peacetime Stock Fund Inventories	(147)	(156)	(157)
TOTAL PROGRAM	62,280	74,712	82,006

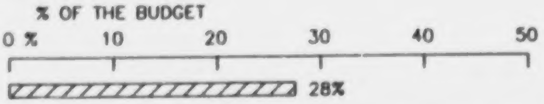
NOTES:
1. FY 84 Total Program includes Summer Olympics, $33M.
2. FY 84 (*) column does not include Retired Pay Accrual.
3. Columns may not add due to rounding.

MILITARY PERSONNEL -- $28.5 BILLION



Approximately 35% of the Army budget is allocated to military personnel. The military personnel accounts provide for pay, subsistence, other allowances, Retired Pay Accrual, and individual changes in duty stations for soldiers in the Active and Reserve Components.

Military Personnel, Army:



The FY 86 Military Personnel, Army (MPA) appropriation request is $22,712 million. Table 5.3 shows the Active Army military strengths and areas funded by the appropriation.

Active Component Manpower Program
(End Strength in 000)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Officers	107,883	108,894	110,005
Enlisted	667,711	667,356	666,245
Cadets	4,586	4,550	4,550
Total	780,180	780,800	780,800

Military Personnel, Army
($ in Millions)

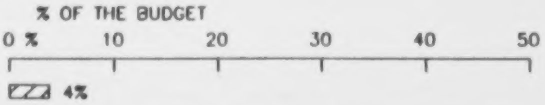
	FY 84* ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Pay and Allowances			
Officers	3,692	5,483	5,749
Enlisted	9,625	14,136	14,540
Cadets	33	33	33
Subsistence - Enlisted	972	1,037	1,073
Permanent Change of Station Travel	948	907	1,097
Other Military Personnel Costs	77	130	219
Total Program	15,348	21,725	22,712

* FY 84 column does not include Retired Pay Accrual.

TABLE 5.3

The FY 86 MPA request of $22.7 billion will support an end strength of 780,800. Total Obligational Authority (TOA) increases from FY 85 to FY 86 are due primarily to the 4% pay raise effective 1 Jan 85 the proposed 3% pay raise to be effective 1 Jul 85, increased Permanent Change of Station (PCS) travel entitlements and the new All-Volunteer Force Educational Assistance Program. Increased PCS entitlements include a temporary lodging expense (TLE) allowance for CONUS assignments, dependent travel entitlements for junior enlisted service members and increased household goods weight allowances for all service members. The FY 1985 Authorization Act provided for the establishment of a new educational assistance program to be budgeted on an accrual basis for a three year period beginning 1 July 1985.

National Guard Personnel, Army:



The FY 86 National Guard Personnel, Army (NGPA) budget request of $3,431 million provides pay and related expenses for Army National Guard personnel. Table 5.4 shows Army National Guard personnel strengths and the NGPA budget categories.

US Army National Guard
(End Strength in 000)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Pay Group A	383,074	388,262	388,779
Pay Group F	16,395	16,968	18,468
Pay Group P	18,134	12,570	12,570
Full-Time Active Duty	16,656	20,583	30,679
Total	434,259	438,383	450,496

National Guard Personnel, Army
($ in Millions)

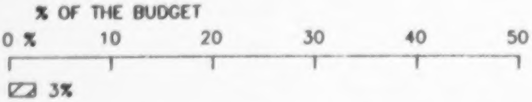
	FY 84* ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Pay Group A/P	1,025	1,600	1,719
Pay Group F	174	271	308
School Training	95	142	172
Special Training	82	125	159
Administration/Support	472	771	1,073
Total Program	1,848	2,909	3,431

* FY 84 column does not include Retired Pay Accrual.

TABLE 5.4

The FY 86 request supports a 450,496 personnel end strength or a 2.8% increase over FY 85. Funding includes a recruiting objective of 55,000 Non-Prior Service (NPS) personnel for initial active duty training and 44,000 Prior Service personnel for a total of 99,000 in FY 86. The full time Active Guard support force increases to 30,679 (10,096 over FY 85). Funding for National Guard personnel supports increases in School and Special Training ($64 million), full-time support ($265 million), extra week annual training,additional training assemblies and an increase in strength of Pay Group A/P ($119 million). The Incentive Program, which provides enlistment and reenlistment bonus and educational assistance, amounts to $37 million. Pay Group F, which provides for initial active duty training, is increased by $37 million to provide costs associated with training the NPS accessions.

Reserve Personnel, Army:



The FY 86 Reserve Personnel, Army (RPA) budget request is $2,394 million. Table 5.5 shows Army Reserve personnel strengths and Army Reserve budget categories.

Reserve Personnel, Army
(End Strength in 000)

	FY 84* ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Paid Drill Strength	255,393	263,058	272,498
Active Duty Strength	8,822	10,700	14,714
Individual Mobilization Augmentees (IMA)	10,847	11,888	13,315
Total	275,062	285,646	300,527

Reserve Personnel, Army
($ in Millions)

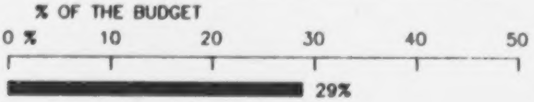
	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Pay Group A/P	640	983	1,040
Pay Group F	125	201	241
Pay Group D	15	32	37
School Training	53	115	128
Special Training	66	109	111
Mobilization Training (IRR)	57	110	113
Administration/Support	277	433	603
ROTC	75	93	108
Health Professions/ Scholarship Program	14	15	14
Total Program	1,322	2,091	2,394

* FY 84 column does not include Retired Pay accrual.

TABLE 5.5

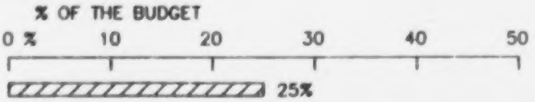
The FY 86 budget request will fully fund annual and inactive duty training at required (statutory) levels. In addition, it will fully fund the recruiting program and provide for 8,300 ROTC graduates. Funding will support an increase in USAR Selected Reserve average strength of 13,827. Included in this increase are 2,909 AGR individuals of which 2,219 are Full-Time Manning personnel in direct support of unit readiness. In addition, this request provides for increases in School/Special/Mobilization Training which will decrease MOS mismatch and increase mobilization capability of IRR and troop program unit members.

OPERATION AND MAINTENANCE -- $24.2 BILLION



Approximately 29 percent of the Army budget is allocated to Operation and Maintenance which provides for all operational activities to include: maintaining the near-term readiness of our units; supporting unit and individual training requirements; supporting recruiting, examining, and processing of the volunteer force; operating the logistical maintenance base; and operating the Army's supply system. Operation and maintenance funds also support the maintenance of facilities, pay the salaries of the civilian workforce, and contribute toward providing an adequate living and working environment.

Operation and Maintenance, Army:



The distribution of Operation and Maintenance, Army (OMA) by program is shown in Table 5.6.

Budget Program
($ in Millions)

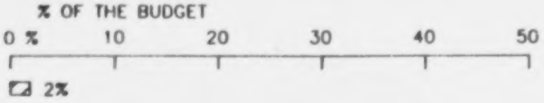
	FY84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
2 - General Purpose Forces	2,877	3,215	3,369
3 - Intelligence/Communications	934	1,100	1,191
7 - Central Supply	2,827	2,385	3,003
7 - Maintenance	1,807	2,255	2,333
7 - Environmental Restoration	-	-	128
8 - Training	913	1,072	1,127
8 - Medical	1,142	1,229	1,274
8 - Other	537	612	664
9 - Administration	861	925	1,034
10- Other Nations Support	99	187	193
11- Base Operations (-)	2,671	2,820	2,965
12- RPMA	2,638	2,804	2,910
Total Program	17,306	18,604 *	20,191

* FY 85 will include an additional $572 million of obligation authority resulting from a Stock Fund pass through.

TABLE 5.6

The FY 86 request of $20.2 billion provides for the enhancement of near-term readiness of the existing force and maintains the capability to expand the force through mobilization. The supported force will consist of 18 Active divisions, 7 separate brigades, and 3 armored cavalry regiments. Training resources will provide for the operation and maintenance of 8 Army Training Centers, 30 Army schools and colleges, and 6 DoD and Joint Service schools and colleges. The training budget will also provide for 28 battalion task force rotations through the National Training Center. The U.S. Army Information Systems Command will support U.S. and allied forces in 15 countries. The OMA budget will finance the activities of 14 supply depots, 35 supply depot activities, 5 reserve storage activities, 6 accountable supply distribution centers, 29 command procurement offices, and 58 program management offices. The Depot Materiel Maintenance and Support Activities provide for Depot Maintenance, Equipment Modernization and Maintenance Support Activities. The fielding of new, more complex systems will be supported by adequate training of field and depot maintenance personnel. Primary health care will be delivered through the operation of 50 hospitals and numerous separate dispensaries and health clinics. The budget supports active Army recruiting, advertising and examining activities; operation of reception stations; and other general personnel activities. The FY 86 budget request for Army Real Property Maintenance Activities (RPMA) will allow the Army's facilities engineers to operate and maintain facilities at 95 major installations in the United States, 39 major military communities in Europe, 169 installations and activities in the Pacific, and a Panama Defense Complex. The Base Operations will provide the resources to operate and maintain the base operations functions at 339 locations in CONUS and overseas. Other Nation Support provides resources to fulfill Army responsibilities for U.S. financial contributions to international activities.

Operation and Maintenance, Army National Guard:



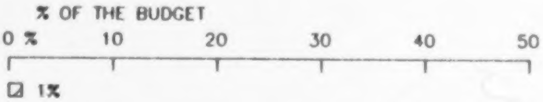
Operation and Maintenance, ARNG
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Training Operations	149	166	173
Logistical Support	794	950	1,048
Base Operations	94	129	139
Depot Maintenance	50	67	86
Headquarters and Command Support	69	83	93
Recruiting	12	31	48
Medical Support	9	13	18
Total Program	1,177	1,439	1,605

TABLE 5.7

The funding categories of the FY 86 Operation and Maintenance, Army National Guard (OMARNG) appropriation are shown in Table 5.7. Real growth in FY 86 is approximately 10 percent and occurs as a result of programed force structure modernization, increased support for modernized systems (87) added to the ARNG equipment inventory since FY 83, and readiness improvements. In addition, this appropriation supports a technician and civilian end strength of 24,553 at a cost of $667.3 million which accounts for 42 percent of the total appropriation value.

Operation and Maintenance, Army Reserve:



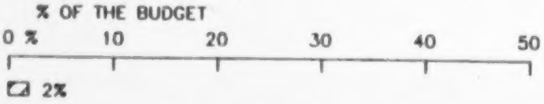
Operation and Maintenance, Army Reserve
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Training/Organization of Mission Forces	394	407	434
Depot Maintenance	8	9	10
Base Communications	17	18	19
Base Operations	197	203	206
Recruiting	35	43	53
Management Support	41	53	58
Total Program	692	733	780

TABLE 5.8

The FY 86 Operation and Maintenance, Army Reserve (OMAR) appropriation request (Table 5.8) includes total growth of 6.4 percent. OMAR will provide increased funding for base operations, recruiting/advertising, readiness, modernization, and force structure initiatives, as well as a moderate increase for supplies and equipment. The budget request will not fully fund all authorized stock fund equipment for all troop program units. An increase in Real Property Maintenance activities fully funds annual recurring requirements.

Army Family Housing:



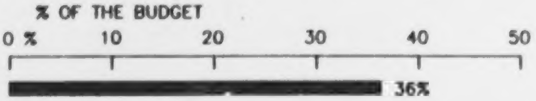
The Army Family Housing appropriation is shown in Table 5.9. Real growth is primarily in the new construction and construction improvement accounts. Funds provide for new construction at Fort Ord, California (600 units), Fort Drum, New York (800 units), Dugway Proving Grounds, Utah (104 units), and United States Army, Europe (476 units). The new construction account provides facilities for 334 mobile homes at eight Army installations. The request will provide a program to upgrade 1,629 substandard housing units into 1,372 adequate units, renew 3,015 existing units and provide Energy Conservation and other improvements to 9,297 units at a total cost of $166 million. Additionally, the budget represents authorization for 19,170 leases which support the needs of forward deployed soldiers and provide housing for civilians living in Panama, Korea, and Germany.

Army Family Housing
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
New Construction	73	43	189
Improvements	100	100	166
Operation & Maintenance	983	1,084	1,122
Leasing	78	105	134
Total Program	1,234	1,332	1,611

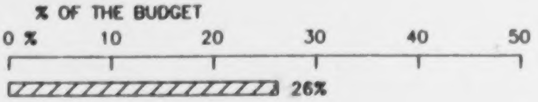
TABLE 5.9

INVESTMENT -- $29.3 BILLION



Approximately 36 percent of the FY 86 budget is requested for investment programs: procurement; research, development, test and evaluation; and military construction.

Procurement



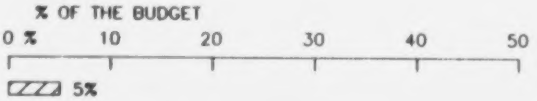
Procurement Overview
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Aircraft Procurement, Army	3,237	3,901	3,893
Missile Procurement, Army	2,840	3,158	3,387
Procurement of Weapons & Tracked Combat Vehicles, Army	4,696	4,548	5,739
Procurement of Ammunition, Army	1,980	2,646	2,635
Other Procurement, Army	4,656	5,122	5,713
Total Program	17,409	19,376	21,366

TABLE 5.10

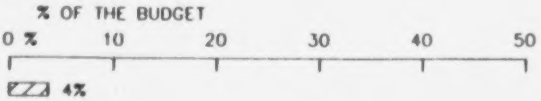
The FY 86 procurement appropriation requests are shown in Table 5.10. They seek to balance procurement for near-term force readiness with long-term modernization needs.

Aircraft Procurement, Army:



This request will provide funds to procure: 144 APACHE (AH-64) aircraft; 78 BLACK HAWK (UH-60A) aircraft; 18 QUICK FIX II (EH-60A). Each of these procurements include spares and related long lead time engines and avionics equipment. It will also fund the modernization of 48 CH-47D Chinook medium lift helicopters; the Army Helicopter Improvement Program (AHIP) for the OH-58; modifications of other fielded aircraft which includes accelerated modifications of AH-1G Cobra's to more rapidly modernize the ARNG AND USAR; and support equipment and facilities.

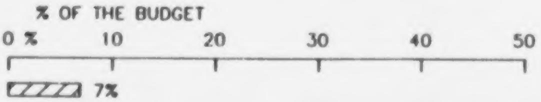
Missile Procurement, Army:



This account includes funds to procure: 585 Patriot missiles with 12 fire units; 3,439 Stinger missiles; 72,000 Multiple Launch Rockets with 44 launchers; additional Pershing II missiles; and associated support equipment. The request also includes funds for modification of TOW II, HAWK, and Chaparral.

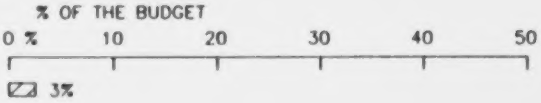
Funds are also included to procure air defense targets, to provide missile system support items, to improve the production base, and to obtain spares and repair parts for procurement and modification programs.

Procurement of Weapons and Tracked Combat Vehicles, Army:



This account funds continued procurement of the 840 Abrams tanks, 716 Bradley Fighting Vehicles, and their supporting systems. Procurement of Unit Conduct-Of-Fire Trainers for our armored vehicles is also included. Modification programs include the M113 armored personnel carrier family of vehicles, M60 tanks, and the M109 series 155mm self-propelled howitzer. FY 86 funds also procure the squad automatic weapon and spares and repair parts to support new systems and fielded equipment.

Procurement of Ammunition, Army:

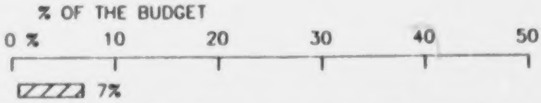


This account includes two major programs: ammunition hardware and production base support.

Funds for ammunition hardware provide for the Army's entire family of tanks; various types of 155mm artillery ammunition, mainly consisting of new improved conventional munitions, and artillery-delivered mines. Funding is also included for training ammunition and for procurement of the binary chemical round.

Ammunition production base support funds provide for modernization of existing World War II facilities and for expansion of the production base required to provide production capability for new, modernized munitions.

Other Procurement, Army:



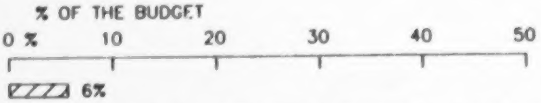
Other Procurement, Army (OPA) funds tactical and support vehicles, communications and electronics, and other support equipment.

Funds for tactical and support vehicles provide for 770 10-ton trucks to accomplish ammunition resupply, refueling and to support systems such as MLRS, Pershing II, Patriot and the SGT York gun. This request includes funds for 2,179 5-ton trucks which are required to fill unit shortages and to support systems such as the Abrams tank, BFVS, Patriot, and Tacfire. In addition, this request includes funds for 13,383 HMMWV's which fill some unit shortages and support the fielding of new equipment.

Communications-electronic equipment constitutes close to 60 percent of the Other Procurement, Army appropriation request. Significant FY 86 budget initiatives include the modernization of battlefield communications through the procurement of 4 divisions worth of SINCGARS (Single Channel Ground Air Radio System) 2 divisions and a corps signal battalion worth of Mobile Subscriber Equipment (MSE), and increased TRITAC initiatives. The FY 86 budget also will procure Remotely Piloted Vehicles (RPV) for an early operational capability for some forward deployed forces.

The other support equipment category will procure a variety of construction items, material-handling equipment, generators, medical equipment and other items that increase our battlefield support capability. It also will provide replacement items for some peacetime losses of equipment in the current support equipment inventory. The FY 86 budget will begin a multiyear procurement of the M-9 Armored Combat Earthmover (ACE) and will improve medical readiness through increased procurement of field medical equipment ($77 million over FY 85).

Research, Development, Test and Evaluation



The major program areas of the Army FY 86 Research, Development, Test and Evaluation (RDTE) appropriation are shown in Table 5.11.

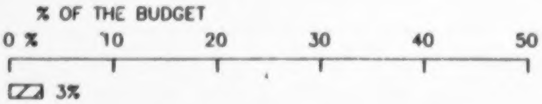
Research, Development, Test and Evaluation, Army
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Technology Base	684	761	876
Advanced Technology Development	342	477	593
Strategic Programs	523	225	236
Tactical Programs	1,726	1,891	2,366
Intelligence and Communication	85	66	68
Defense-wide Mission Support	855	956	1,140
Total Program	4,215	4,376	5,280

TABLE 5.11

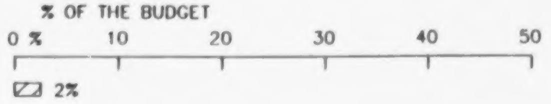
The FY 86 RDTE budget has been structured to achieve five major objectives. These are: continued growth in the technology base in order to keep pace with rapidly changing technology, provide the technology for future new systems, and to prevent technological surprise; continuation of the Army's weapons systems modernization program through both the development of new systems and product improvements to existing systems; continued development of systems to improve our ability to acquire and attack deep targets; increased emphasis on the command, control, communications, and intelligence systems required on the modern battlefield; and improvements to the RDTE testing and management base so as to more efficiently develop and test the Army's future systems. These areas of emphasis and the associated funding are designed to ensure that our soldiers are equipped with the best possible equipment so that, should the need arise, they can accomplish the Army's missions in defense of the United States and our Allies on any future battlefield.

Military Construction



This portion of the budget includes funds for construction to support operations and training, tactical and support maintenance, hospitals, other medical requirements, troop housing, and military community needs. Funds are also included for the planning and design of future programs, unspecified minor construction projects, energy conservation, and pollution abatement.

Military Construction, Army:



The FY 86 Military Construction, Army (MCA) appropriation request is shown in Table 5.12.

Military Construction, Army
($ in Millions)

Facility Category	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Operations & Training	79	284	327
Maintenance & Production	332	338	474
Research & Development	37	42	31
Supply & Administration	59	108	223
Hospital & Medical	23	143	113
Troop Housing/Community Support	319	308	521
Utilities/Land Improvement	131	177	163
Real Estate	0	10	2
Planning Design/Minor Construction	204	183	167
Total Program	1,184	1,593	2,021

TABLE 5.12

The FY 86 request of $2,021 million contains $1,990 million for major construction, $31 million for exigent minor construction. Approximately 28 percent is for construction overseas, primarily in Germany and Korea, 65 percent is for construction in the United States, the remaining 7 percent is for planning and design, exigent minor construction, and access roads. The FY 86 MILCON budget has two thrusts: renewal of deteriorates and obsolete facilities and construction of facilities to meet Army force structure and modernization initiatives.

- Investment of $1.2 billion is for rehabilitation and renewal of deteriorating and obsolete facilities worldwide

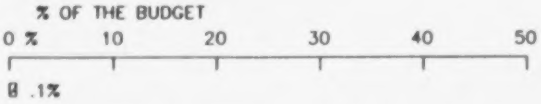
- Maintenance and production facilities include $430 million to modernize facilities and construct tactical equipment maintenance shops, aircraft maintenance hangars and maintenance division complexes.

- Includes $106 million for operational facilities and $221 million for training facilities.

- Includes $113 million to provide quality health care through hospital and clinic renovation and renewal and the first construction phase of Madigan Army Medical Center at Fort Lewis, Washington.

- Includes $430 million for unaccompanied housing and supporting facilities and $91 million for community facilities.

Military Construction, Army National Guard:



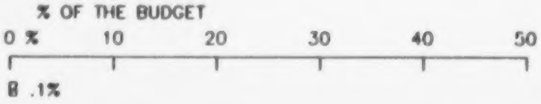
The FY 86 request of $102 for Military Construction, Army National Guard provides for 67 major projects. Included in the major projects are 23 new armories, alteration/expansion of 6 existing armories, 4 aviation facilities, 9 training facilities, 19 equipment maintenance facilities, 3 U. S. Property and Fiscal Office facilities, 2 logistical facilities, and one land acquisition. Increased funding requested for minor construction supports the needs for improved weapons training ranges and storage of unit supplies and equipment. Table 5.13 displays the MCNG appropriation by major category.

Military Construction, Army National Guard
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Armory	27	28	26
Non-armory	31	46	45
Minor Construction	7	16	19
Planning and Design	3	9	12
Total Program	68	99	102

TABLE 5.13

Military Construction, Army Reserve:



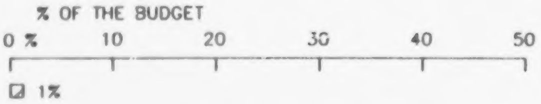
The FY 86 Military Construction, Army Reserve (MCAR) request of $71 million will provide for the major construction, minor construction, and the planning and design of Army Reserve facilities. Categories of major construction projects to be undertaken in FY 86 are five Reserve Centers, one storage facility, and one military intelligence consolidated training facility as well as expansion of 11 existing Reserve Centers. The FY 86 budget will modestly reduce the Military Construction, Army Reserve backlog to $954 million. Table 5.14 displays the MCAR appropriation by major category.

Military Construction, Army Reserve
($ in Millions)

	FY 84 ACTUAL	FY 85 ESTIMATE	FY 86 REQUEST
Major Construction	42	55	55
Minor Construction	5	6	6
Planning and Design	8	8	10
Total Program	55	69	71

TABLE 5.14

Stock Fund -- $442 million:



Stock Fund War Reserves level of $285 million are for inventories of secondary items procured to satisfy wartime requirements from the time a conflict begins until the production base can directly satisfy consumption demands. These stock fund war reserve items are critical for support of the individual soldier as well as for major weapons systems. The FY 86 level will buy such commodities as Class IX repair parts, chemical defense equipment, cold weather clothing and medical/dental equipment, repair parts and supplies.

Peacetime Stock Fund Inventories level of $157 million provide repair parts needed to support weapons systems which will be introduced into the inventory in the near future; medical decrement stocks in USAREUR; and commissary inventory growth to support increase sales.

STATEMENT OF HON. JOHN O. MARSH, JR., SECRETARY OF THE ARMY

Secretary MARSH. Thank you very much, Mr. Chairman and members of the committee

If you could file my statement, I will summarize it, and I will be very grateful.

It is a pleasure to be back before the committee again to thank you for the help and assistance you have given to the Army. Many of the improvements you have alluded to I believe are directly attributable to your efforts in our behalf.

ARMY PROGRAM

If you look at the nature of the Army's procurement, there are several things that drive that.

First is the threat we face.

Second, the nature of the conflict.

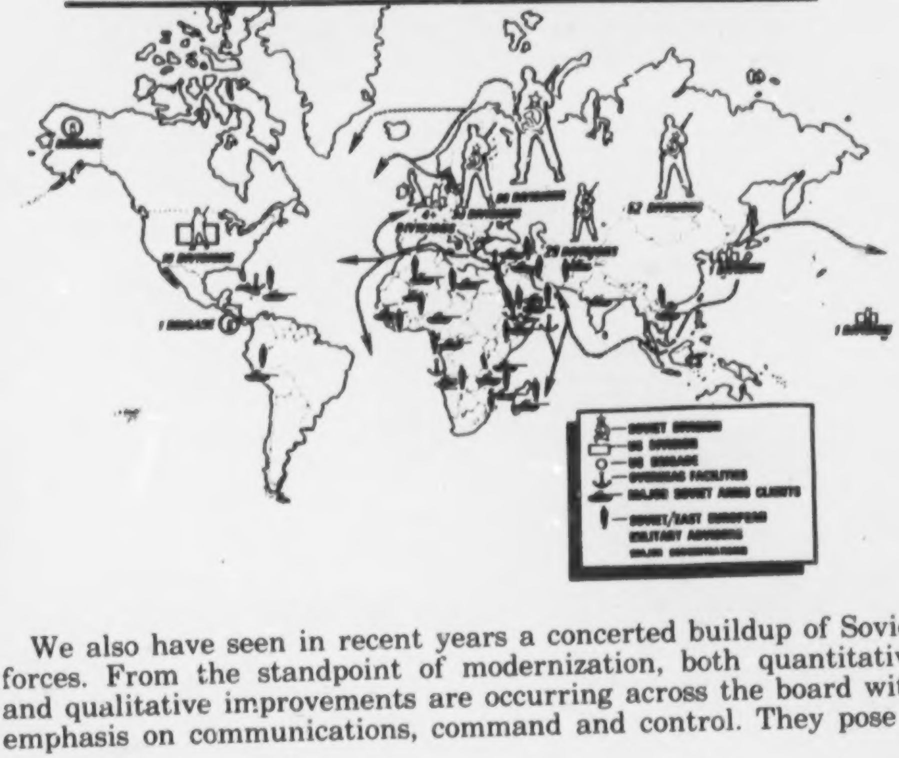
Third, those missions that are given the U.S. Army.

And fourth and overarching all those, resources available to us to put that program together.

SOVIET THREAT

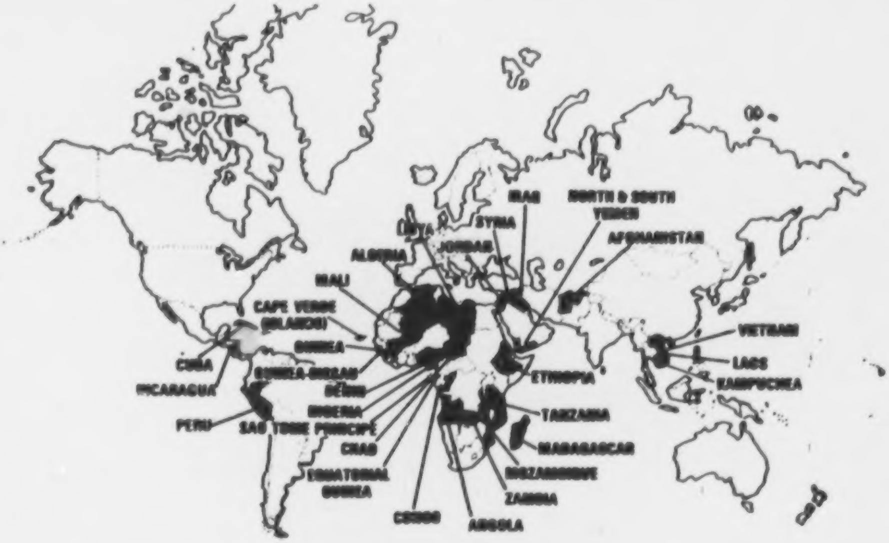
If you look at the threat, we see our potential major adversary as the Soviet Union. They are a Eurasian land-based power with better than 190 divisions in their Army.

SOVIET GLOBAL POWER PROJECTION


SOVIET DIVISION
US DIVISION
US BRIGADE
OVERSEAS FACILITIES
MAJOR SOVIET ARMS CLIENTS
SOVIET/EAST EUROPEAN MILITARY ADVISORS MAJOR CONCENTRATIONS

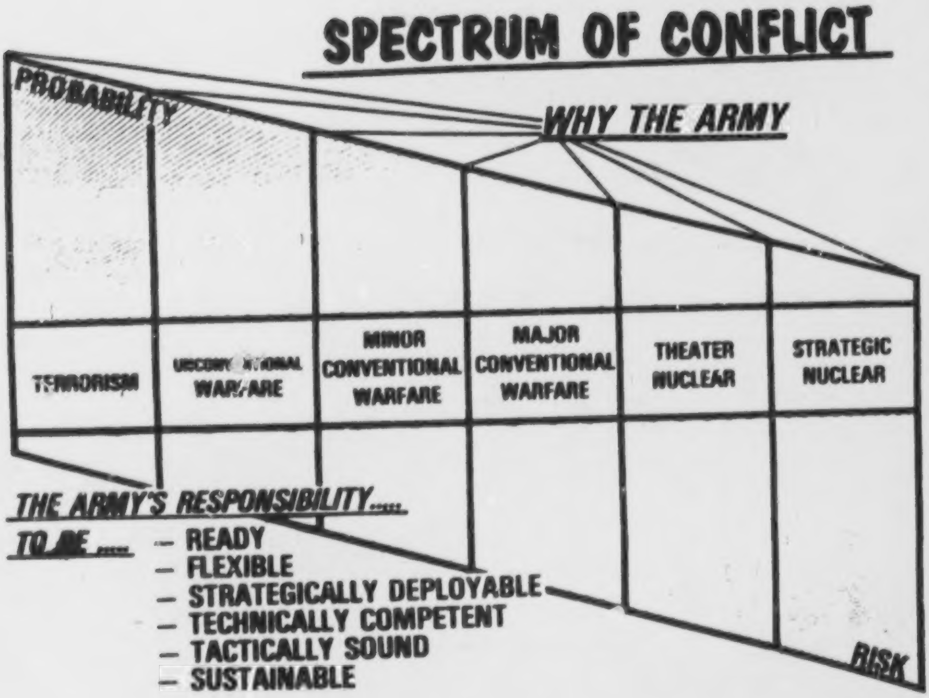
We also have seen in recent years a concerted buildup of Soviet forces. From the standpoint of modernization, both quantitative and qualitative improvements are occurring across the board with emphasis on communications, command and control. They pose a very significant threat of destabilization as we see with their activities in Afghanistan.

In that regard, as we look in recent years, we see a greater representation of Soviet military technicians and personnel outside the Soviet Union. It is estimated there are 20,000 such individuals in 30 countries of the world. You see it is displayed here in this particular chart.


IRAQ
NORTH & SOUTH YEMEN
LIBYA
SYRIA
JORDAN
AFGHANISTAN
ALGERIA
MALI
CAPE VERDE (ISLANDS)
GUINEA
VIETNAM
CUBA
LAOS
GUINEA-BISSAU
ETHIOPIA
NICARAGUA
KAMPUCHEA
BENIN
NIGERIA
TANZANIA
PERU
SAO TOME PRINCIPE
CHAD
MADAGASCAR
EQUATORIAL GUINEA
MOZAMBIQUE
ZAMBIA
CONGO
ANGOLA

SPECTRUM OF CONFLICT

Now, today we talk in terms of the nature of the conflict. It can be codified ranging from the lower end of the spectrum, terrorism to strategic nuclear.


SPECTRUM OF CONFLICT
PROBABILITY
WHY THE ARMY
TERRORISM
UNCONVENTIONAL WARFARE
MINOR CONVENTIONAL WARFARE
MAJOR CONVENTIONAL WARFARE
THEATER NUCLEAR
STRATEGIC NUCLEAR
THE ARMY'S RESPONSIBILITY....
TO BE ....
– READY
– FLEXIBLE
– STRATEGICALLY DEPLOYABLE
– TECHNICALLY COMPETENT
– TACTICALLY SOUND
– SUSTAINABLE
RISK

The interesting aspect of the chart is the juxtaposition of probability and risk. Probability of conflict in the low end of the spectrum is very, very great. There are 22 conflicts or insurgencies currently being waged in the world today. It is this spectrum that has been driving a significant part of the Army policy regarding Special Forces, Rangers, psychological warfare and civil affairs.

It is also the lower end of the spectrum that has driven the development of the light infantry divisions of which General Wickham is the particular architect. The light infantry division gives us deployability and that is quite important in this world today.

We are trying to develop a strong conventional capability in order to be able to deter conventional warfare on the conventional battlefield.

ARMY MISSIONS

I mentioned the Army missions. The missions that are assigned to us by the National Command Authority are six.

First, to defeat the Warsaw Pact and maintain the territorial integrity of NATO.

Second, to deny the Soviets control of and protect continued Allied access to the oil resources in the Persian Gulf.

Three, to defend vital U.S. interest in the Pacific.

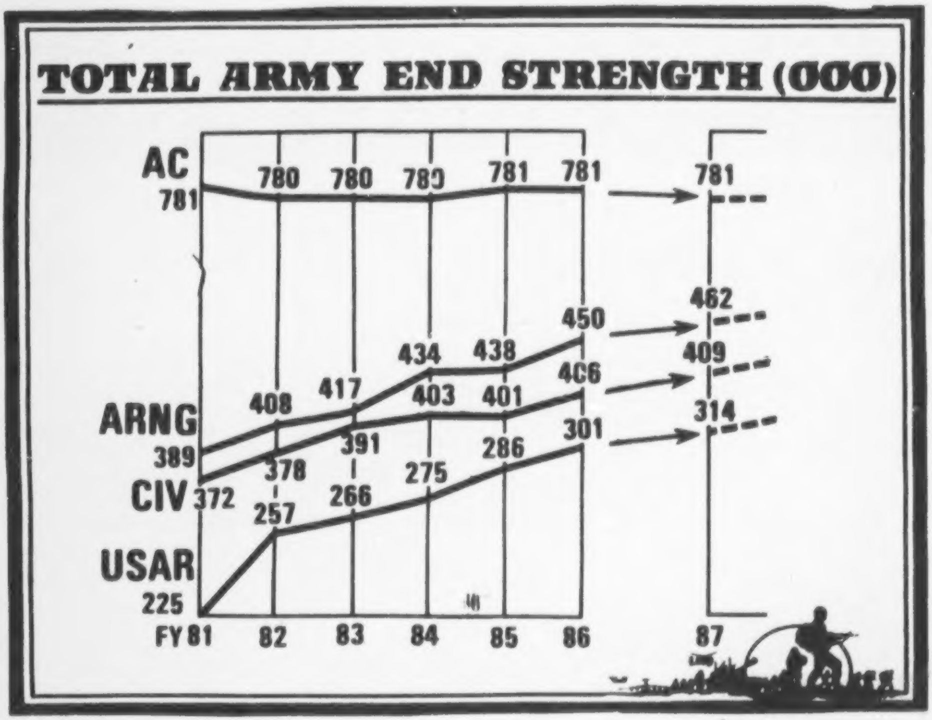
Four, together with our allies to defend our interests in Asia, Africa, and Latin America.

Five, to have a strategic reserve capable of defense of the western hemisphere which, of course, includes Alaska.

Six, to have a force that is capable of responding to the threat that might occur elsewhere in the world. A very tall order.

FUNDAMENTAL DECISION

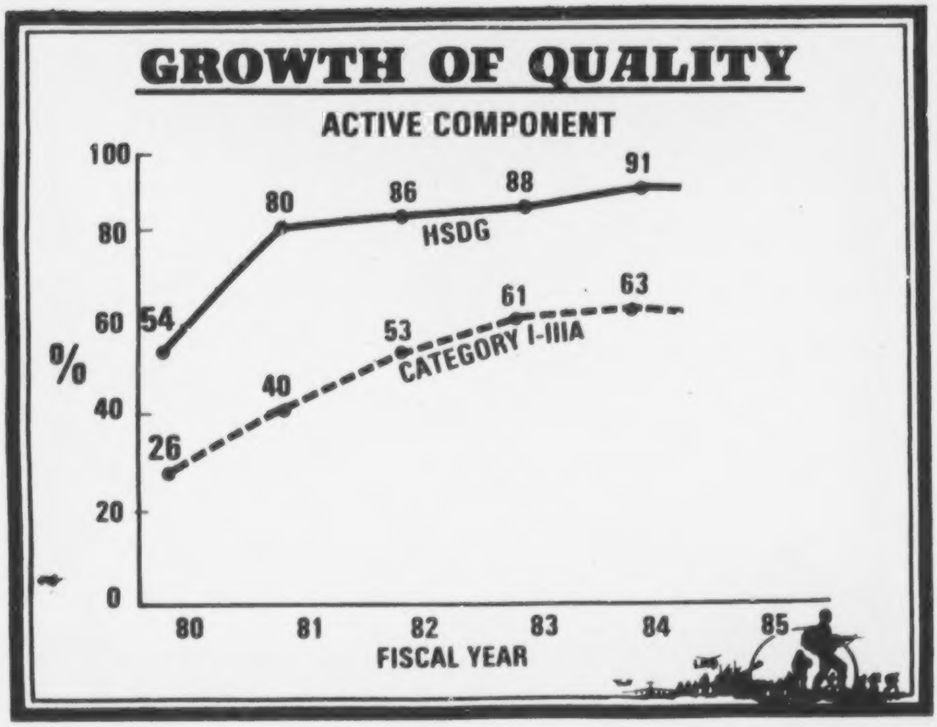
Senator, you made reference to the quality of the American soldier. I would say to you if there is one decision that has driven events for the Army program for the last 4 years, it was the decision made 4 years ago that we would peg the active end strength of the U.S. Army at about 780,000 soldiers.



With that decision a decision was also made that we would concentrate on readiness. That will include modernization, sustainability and training of the Army.

Now, the fact that we pegged the active force at 780,000 did not mean that we would peg the reserve forces. On the contrary, you will see in this year the National Guard will continue to ramp up to about 450,000, and the organized Army Reserve will move to about 301,000.

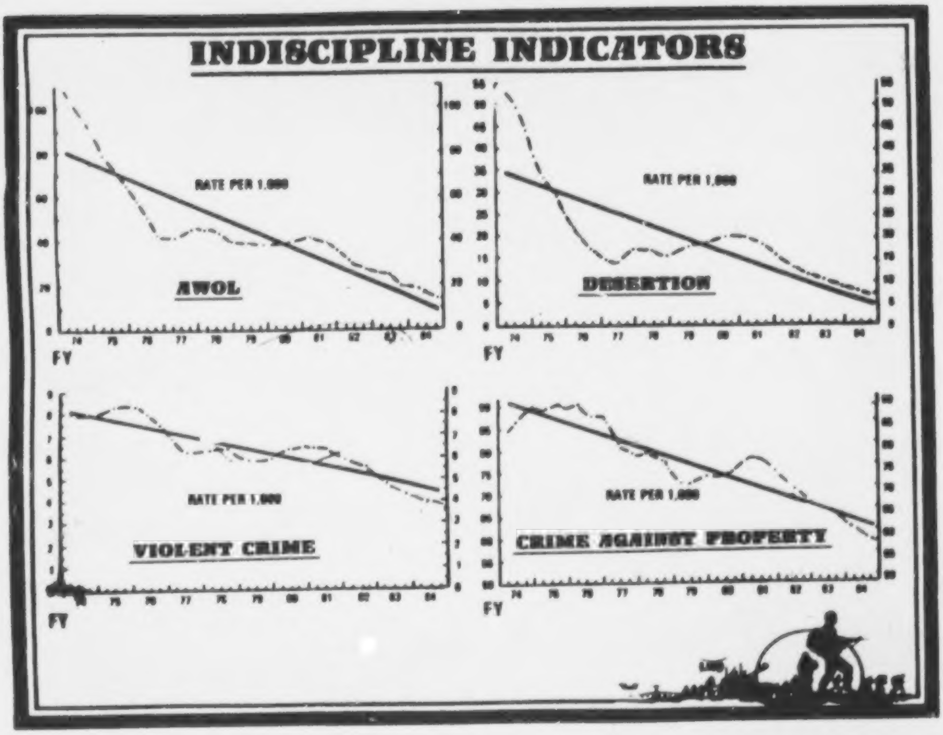
I will point out to the committee for the first time we are approaching a situation where we have nearly a one-for-one relationship between the active force and the Army Reserve components. If you add to that the IRR, 276,000, you will have a substantially greater number in the Reserve component.



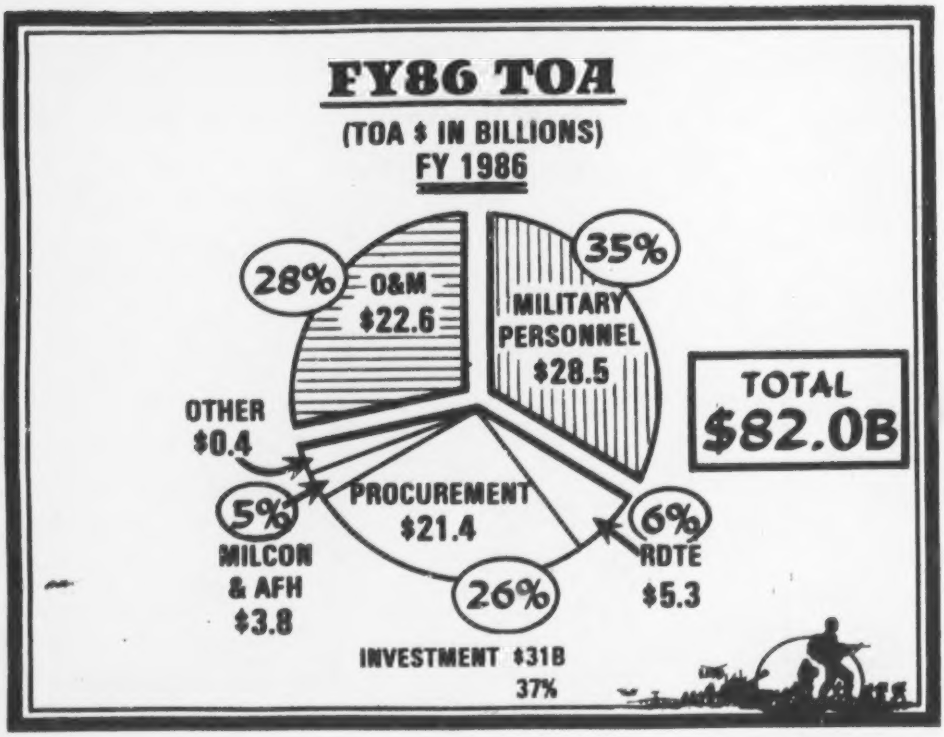
QUALITY OF SOLDIERS

Now, when we look at those soldiers we are enlisting and we look at the last enlistment year, you will see that 91 percent of our recruits were diploma high school graduates. Sixty-three percent were in Categories I to IIIA and only about 10 percent were in the lower Category IV.

This quality individual coming into the Army is highly trainable, very dedicated, very motivated and consequently, makes an excellent soldier. That is reflected in the other chart, one you are not likely to see very often.



We call these the indices of indiscipline. There are four major indiscipline categories that we focus on: AWOL, Absent Without Leave, desertion, crimes against persons—and crimes against property. You will notice in recent years there has been a dramatic decline of those particular indisciplines. In AWOL and desertion the rates in the Army today are lower than any time for which we have records.



ARMY BUDGET

Now, the fourth ingredient of putting that program together relates, of course, to the budget, the resources that are available to us. Senator Nunn has spoken to that.

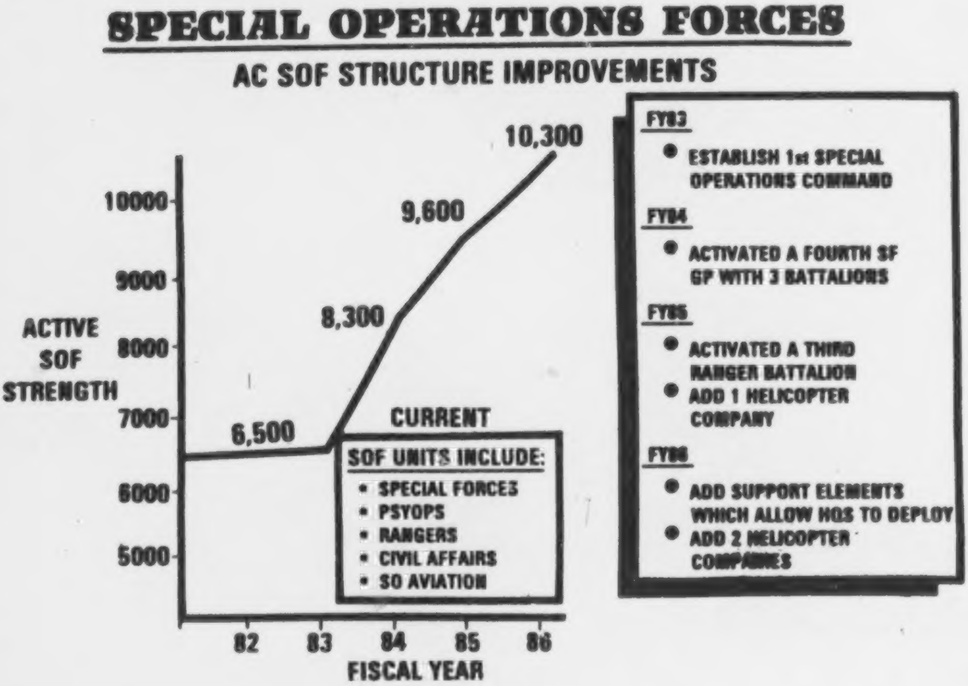
You see that there are three major components of that budget of $82 billion. Those three components are:

One, military personnel which will consume 35 percent of the Army budget or about $28.5 billion.

Twenty-eight percent of the Army budget will go to operation and maintenance. That is your very important training programs.

In our investment account, however, you will see a growth there to where it is 37 percent of the Army budget, nearly $31 billion. Now, when you look at that program, let us focus also on the National Guard and Reserve. We have some points to make here.

One, in this budget of $82 billion, we will put $11 billion in the National Guard and in the Reserve, an indication of the emphasis that we are placing on the total force policy and to make them equal partners in the total force. Thirteen percent of the budget will go into the Guard and Reserve. Of that, $5.58 billion will go into the personnel account in Guard and Reserve, $2.4 billion in operation and maintenance of the Guard and Reserve and $2.5 billion will go in the procurement or investment account of the Guard and Reserve. Last year we moved into the National Guard and Reserve some $1.4 billion of modern equipment. We will match that amount in fiscal year 1986. The $2.5 billion in fiscal year 1986 new procurement relates to the out year deliveries of equipment and ammunition.



SPECIAL OPERATIONS FORCES

I mentioned to you earlier the emphasis we are placing on Special Operations Forces. I use this chart to show you that since 1983 we have ramped up from 6,500 to 10,300 in the Active Component Special Operations Forces, principally Rangers and Special Forces.

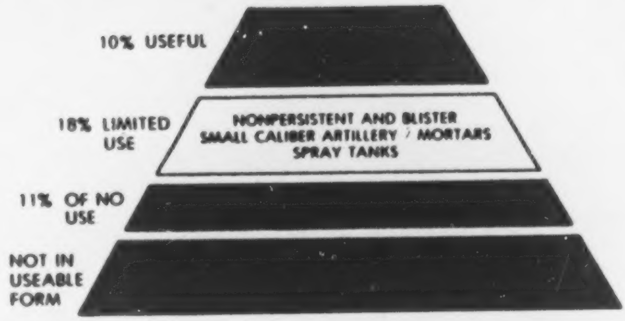
We organized last year the 3d Battalion of Rangers and a Ranger Regimental Headquarters at Fort Benning, GA. That 3d Battalion is already at a strength of 140 percent. This is an indication of our concerns on capabilities for the lower end of the spectrum of combat.

CHEMICAL WARFARE

Now, I would be remiss if I did not mention to you our continued concerns on our chemical warfare capabilities. We know that the Soviets have it. They are placing great emphasis on it. In the event of conflict, we would expect them to use it. We will be at a remarkable disadvantage.

RETALIATORY CAPABILITY

current stockpile...



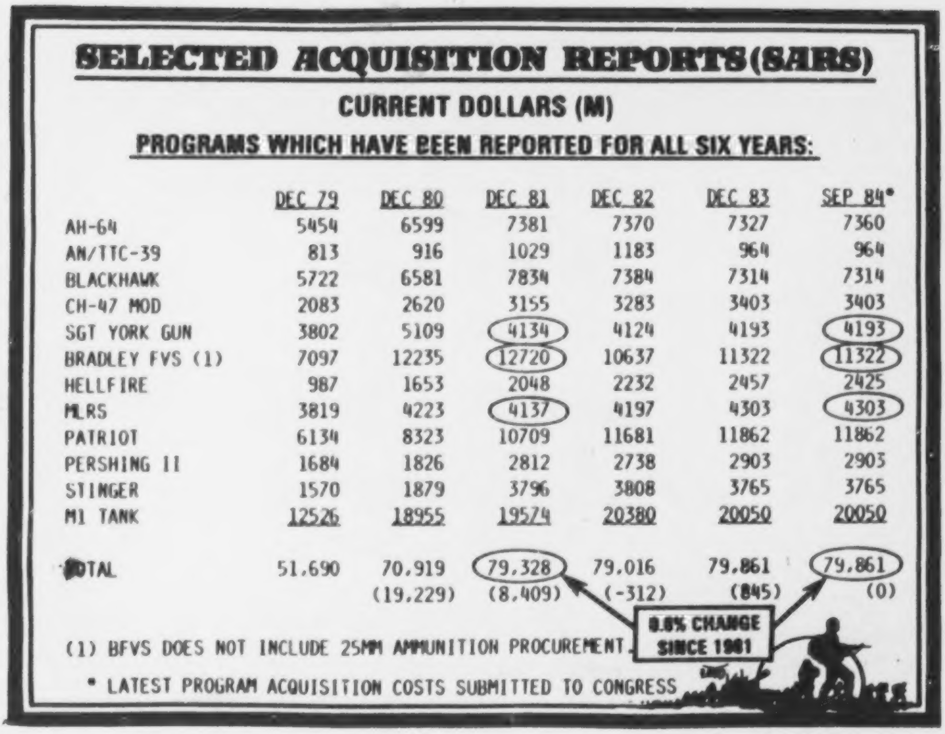
—UNITARY—

That disadvantage and imbalance must be corrected by a development of a retaliatory capability through the use of binary weapons. Consequently, through our capability to retaliate, we will hopefully keep chemical weapons off the battlefield. Certainly that was the experience of World War II and we believe that will be true today.

STEWARDSHIP OF RESOURCES

In looking at the mass of our accounts and the stewardship we have for Army programs, let me make a point in the activation of the 10th Mountain Division at Fort Drum. We are exploring the opportunities for third-party financing to see if some of the capital investment there can be carried by third-party sources. We might be successful. We are not certain at this time. Nevertheless, we are hopeful that some portion of those assets and facilities that we need there can be acquired through third-party financing. That will be a very significant step for us if it can be accomplished.

Four years ago, shortly after I was confirmed as Secretary of the Army, I reported to you there had been five breaches under the statutory requirement called the Nunn-McCurdy amendment. One was Pershing II, one was Roland. The others were Hellfire and Apache AH-64, and Patriot.



SELECTED ACQUISITION REPORTS(SARS)

CURRENT DOLLARS (M)

PROGRAMS WHICH HAVE BEEN REPORTED FOR ALL SIX YEARS:

	DEC 79	DEC 80	DEC 81	DEC 82	DEC 83	SEP 84*
AH-64	5454	6599	7381	7370	7327	7360
AN/TTC-39	813	916	1029	1183	964	964
BLACKHAWK	5722	6581	7834	7384	7314	7314
CH-47 MOD	2083	2620	3155	3283	3403	3403
SGT YORK GUN	3802	5109	4134	4124	4193	4193
BRADLEY FVS (1)	7097	12235	12720	10637	11322	11322
HELLFIRE	987	1653	2048	2232	2457	2425
MLRS	3819	4223	4137	4197	4303	4303
PATRIOT	6134	8323	10709	11681	11862	11862
PERSHING II	1684	1826	2812	2738	2903	2903
STINGER	1570	1879	3796	3808	3765	3765
M1 TANK	12526	18955	19574	20380	20050	20050
TOTAL	51.690	70.919	79.328	79.016	79.861	79.861
		(19.229)	(8.409)	(-312)	(845)	(0)

0.6% CHANGE SINCE 1981

(1) BFVS DOES NOT INCLUDE 25MM AMMUNITION PROCUREMENT.

* LATEST PROGRAM ACQUISITION COSTS SUBMITTED TO CONGRESS

We have shown and displayed here the reporting charts for the 12 major systems that make up a great deal of the Army procurement for the period of the last 6 years. The key to these charts is how close these columns on the right-hand side coordinate or check with the preceding years' columns because these columns here indicate the total investment that we expect to make to acquire those weapon systems during the life of their production. Whether or not we are on track indicates whether or not we are at or near projected program costs. You will see here from 1981 to 1984 on those 12 systems we are out of sync about 0.6 of 1 percent. You see here the figure for 1984 is $79,800 million and in 1981 it is $79 billion. It is only an indicator, but I will say to you it indicates some discipline that occurs in systems acquisition management, by the contractor, program manager, and the Army management structure.

We are stewards of the assets you give us. We are grateful for your help and support.

It is a pleasure to appear before your committee today and to respond to your questions.

[The prepared statement of Secretary Marsh follows:]

Prepared Statement by Hon. John O. Marsh, Jr., Secretary of the Army

When I became Secretary of the Army there were personnel and equipment shortages and training shortfalls. It was clear that in a dangerous world United States forces would confront most likely enemies outnumbered. We were faced with a fundamental choice. We could expand our active component force levels and military end strength at the price of readiness and modernization. Or, we could maintain our active force levels and military end strength in order to protect our readiness initiatives, sustainability, and minimum essential modernization. We elected to meet the numerical threat with a qualitative response. We chose to maintain readiness and sustainability initiatives and to pursue essential modernization while holding active component end strength at a constant level.

Our improved ability to manage systems was one result of the approach we chose to fix what was then called the Hollow Army. When I addressed you 4 years ago the Army was in the unfortunate position of having to report five violations of the Nunn-McCurdy amendment. The Roland, the Hellfire, the Patriot, the Pershing II and the Apache were the systems out of tolerance. Since that time, considerable progress has been made in this area.

The decision to cap the active component end strength put the premium on quality in our manning programs, and we have been successful in attaining that quality. This last year we continued our recruiting record of 1983. High School graduates enlisting in the Active Component increased to 90.8 percent. At the same time Test Category IV's fell to 10.1 percent.

These soldiers and their families are entitled to the same quality of life as the society they are pledged to defend. To assure that quality, the Army, through the year of "The Army Family", produced an extensive system of information and services designed to support the entire Army Family, active, reserve, civilians, retired and family members. New manning and force structure initiatives such as COHORT and the regimental system recognize and capitalize on the direct relationship between Army readiness and family well being.

The most profound impact of our fundamental choice was the unprecedented increased reliance on our Reserve Components. Most manpower increases must come in the Army Reserve and National Guard. Ten combat divisions, representing 36 percent of the combat force, come from the Army National Guard. Two thirds of the Army's combat service support capability comes from Reserve Component units. This trend will continue and it will mean increasing demands on our citizen soldiers, their families, and their employers.

The Army continues to experience success in recruiting and retention, but is forced to address a diminishing youth market, improving employment rates and inequities in military versus civilian pay. While programs have been designed to address these problems, it is clear that in the future manning the force will be more difficult than in recent years.

The primary threat to United States interests remains the Soviet Union through its influence and range of activity. Both are expanding in size and in sophistication. The Soviets' belief that the next war will be global in scope, unprecedented in pace and dramatic in social and economic impact has generated a corresponding modernization and growth on their part.

We confront an increasing threat on old ground. NATO now faces nuclear capable artillery, improved short range ballistic missiles and reorganized air defenses. These improvements are brought together in the Operational Maneuver Group concept; the Soviet equivalent to our AirLand Battle doctrine.

The Soviet Union continues to export its aggressive intentions beyond its borders. It supplies more military equipment to Third World nations than any other country. It equips and trains surrogate forces around the world. And it relies on its connections with countries like Syria and Ethiopia, Cuba, and Nicaragua, and North Korea and Vietnam to exploit regional tensions and conflicts.

Even without Soviet influence, peace and stability are difficult objectives in the Third World. Economic hardship, social injustices, and traditional international and religious animosities persist, constantly threaten our attempts to maintain stability among Third World nations. These problems are on the rise as are their attendant forms of violence and aggression; terrorism, insurrections and insurgencies.

While the principal mission of the Army is to develop readiness, we do so in response to the threat I've just described. Our mission is best explained in a series of statements which describe the global Landpower requirement:

Defeat a Warsaw Pact attack on NATO;
Deny Soviet control of the Persian Gulf;
Support friends and allies in Asia, Latin America and Africa;
Defend vital U.S. interests in the Pacific;
Maintain a strategic reserve to counter threats in the western hemisphere; and
Respond to other threats to U.S. interests.

The fiscal year 1986 Budget supports initiatives that will enhance the Army's capability to respond fully and flexibly when necessary. The budget is designed to continue the improvement of the Army along the course established during the past 4 years, through capitalization on force multipliers that increase combat leverage.

The framework that focuses the Army's direction is its combat doctrine, AirLand Battle, a doctrine which seeks to seize and exploit the initiative, to defeat the enemy through the synchronization of combat power and to attack the enemy to its full depth. AirLand Battle is the doctrinal lever which enables numerically inferior, but qualitatively superior forces and equipment to prevail.

Several AirLand Battle force structure initiatives are underway to improve strategic deployability, the effectiveness of heavy, light, and special operations units, and the support forces that provide staying power. Despite the deliberate constaint on Active Component end strength, effective capitalization on technology and the full integration of Reserve Components can ensure that these improvements will enable the Army to effectively respond to the entire spectrum of conflict.

The Army's extensive review of the changing world situation, national strategy, force structure, and dispositions, led to the conclusion that modernization of our light forces was essential both to respond to emerging low intensity threats, and to improve our ability to execute AirLand Battle. Light forces, correctly employed in urban areas and close terrain such as forests, can free armored and mechanized forces to counter the enemy on more suitable, open terrain. Their increased strategic mobility permits an early commitment of forces to a developing situation at the lower end of the spectrum of conflict, possibly avoiding the choice later of a larger commitment or abandoning the field. Guidance for the design of the light infantry division required that it be able to deploy in approximately 500 C141B sorties, contain approximately 50 percent infantry, and that it include innovative, lethal and flexible capabilities as well as a relatively austere support base. Beginning with the activation of the 10th Mountain Division (Light Infantry) later this month, and over the next three year period, the Army will activate new divisions and restructure two existing divisions to arrive at a force level of five light divisions, four Active and one Army National Guard.

The need for increased capability and freedom of action to address threats at the lower end of the spectrum of conflict requires high priority modernization of special operations forces (SOF). Reversing the trends of the post-Vietnam era, the Army embarked on an expansion of SOF elements in the early 1980s. The Special Operations Master Plan of April 1984 guides the enhancement effort for the coming years. 1986 will see several unit activations along with manpower and funding growth. The Reserve Components are significant participants in these efforts as they provide both Special Forces units and the predominance of Psychological Operations and Civil Affairs units.

By September 1986 all of these initiatives will have led to a Total Army force authorization mix that has slightly less than 50 percent of both combat and support functions in the Active Component.

Heavy forces are continuing to convert to a more modern design. These refinements improve affordability and operational flexibility through greater efficiency in organization and prudent tailoring of the force to implement AirLand Battle doctrine. Reserve Component affiliation with Active Component units will continue, with roundout units converting to new unit designs at about the same time as their associated Active Component unit. In line with AirLand Battle doctrine and restructuring of heavy and light forces, corps level units are undergoing redesign to provide the corps commander the assets he needs to influence the battle. The provision of both support and combat units will provide greater flexibility to respond to anticipated threats.

Along with force structure changes, we intend to provide the American soldier with better equipment than any potential enemy. We have caught hold of the modernization challenge and are now integrating over 400 new items and systems into the Army while maintaining readiness and training standards. As stewards of resources we are seeking balance between light and heavy forces, combat and support units, and forward deployed and augmenting forces. As well, the balance between planning the acquisition of future equipment and sustaining existing systems must be maintained. The Army's "first to fight, first equipped" philosophy requires both active and reserve units to receive new equipment and turn in old, to reorganize units around new equipment, and to train and maintain to fight as part of the Total Army. At the end of fiscal year 1986 fourteen battalions will have received major new weapons systems with $1.4 billion worth of new or displaced equipment scheduled for the Reserve Components.

The increased sophistication of equipment and the imperatives of AirLand Battle, demand emphasis on realism in training and efficient use of training resources. The Army's extensive range modernization program and our training device and simulation initiatives are upgrading training opportunities while restraining training costs. An improved flying hour program and continued intensity of National Training Center rotations, have increased individual proficiency and unit training readiness.

The Army Posture Statement details the specific accomplishments we have made in providing American soldiers better equipment and, as you know, the results of the system acquisition review process indicate we have a solid foundation for rational acquisition actions. This newly acquired equipment is a part of the most extensive modernization in the Army's history. The integration of this new equipment into a revamped force structure and the transfer of displaced equipment requires skillful management. Coupling this force modernization challenge with innovative management of fixed end strength and limited manpower and dollar resources is designed to achieve a single objective—improved readiness.

The light infantry initiative directs attention toward what may be the national Achilles heel, our strategic mobility shortfall. We are working steadily with the other services to improve airlift and sealift capabilities. During 1984, airlift was increased by 2.4 million ton miles per day. Sealift increased with the conversion of four commercial ships to the roll on/roll off configuration and with increases from 34 to 46 ships in the Ready Reserve Force. Even with these improvements our strategic mobility is far from adequate. The light infantry initiative relieves the shortfall to some extent, but the requirement for global military deployment far out distances our national capabilities. The Army will benefit greatly from service and commercial actions to increase airlift and sealift.

If the Army has an operational and tactical Achilles heel, it is our chemical warfare retaliatory capability. At a time when the chemical warfare threat is increasing around the world, in all levels of conflict, our posture for battle with enemies armed with chemical weapons remains weak. Our chemical defense readiness has been improved by providing more protection, decontamination, and monitoring equipment. Serious shortages remain. In fiscal year 1986 we will begin procurement of a new collective protection shelter and an improved mask. But even improved chemical defense does not compensate for the 30 to 50 percent loss of operating capability caused by use of the protective equipment. More importantly, our deterrent capability is not adequate and won't be until we field a modern chemical retaliatory capability. Defense alone will not deter chemical warfare. The nation needs to produce binary chemical weapons.

In 1985, the Army theme is "Leadership." We undertake this theme to extend our understanding of leadership, improve our programs to develop leaders, and assess how we, as Army leaders, measure up to our own standards. We must imbue in all leaders the knowledge and inspiration necessary to develop the character and the traits of strong leadership our Army must have in abundance to assure deterrence of war, or victory in battle. If we are successful, we will fulfill the goal that we established for ourselves: A total Army whose leaders at all levels possess the highest ethical and professional standards, committed to mission accomplishment and the well-being of subordinates.

Chairman GOLDWATER. Thank you very much, Mr. Secretary. General Wickham.

STATEMENT OF GEN. JOHN A. WICKHAM, JR., CHIEF OF STAFF, U.S. ARMY

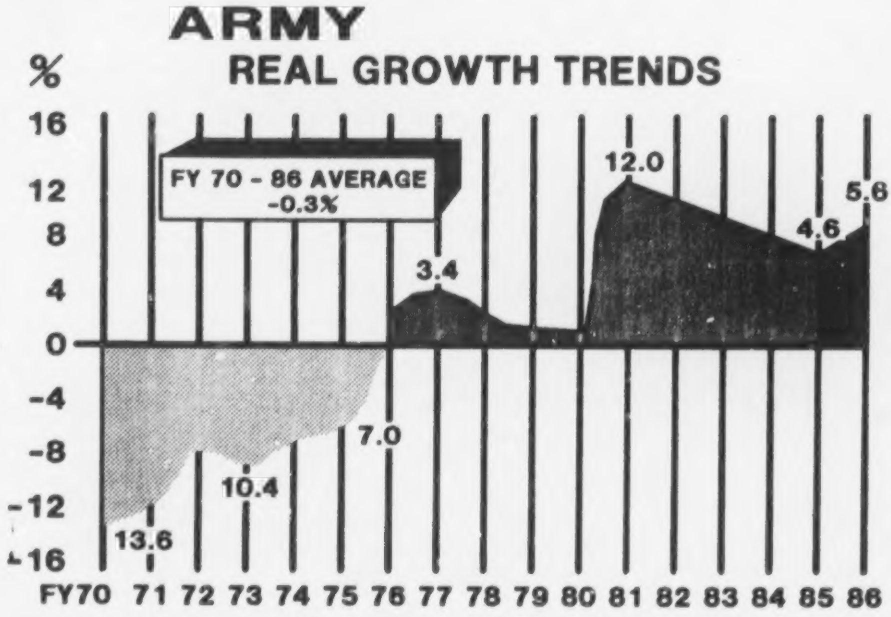
General WICKHAM. Thank you, Mr. Chairman, for the opportunity to appear here. Let me put my statement in the record and take a few moments here to give you a stewardship report on the Army.

Chairman GOLDWATER. Go right ahead.

- BROAD SPECTRUM OF THREATS
- BURDEN OF DETERRENCE SHIFTING TO MODERN CONVENTIONAL GROUND FORCES
- DETERRENT AND WAR FIGHTING CAPABILITY
- RAISES NUCLEAR THRESHOLD

ALWAYS PREPARED . . .
NO MISFORTUNE.

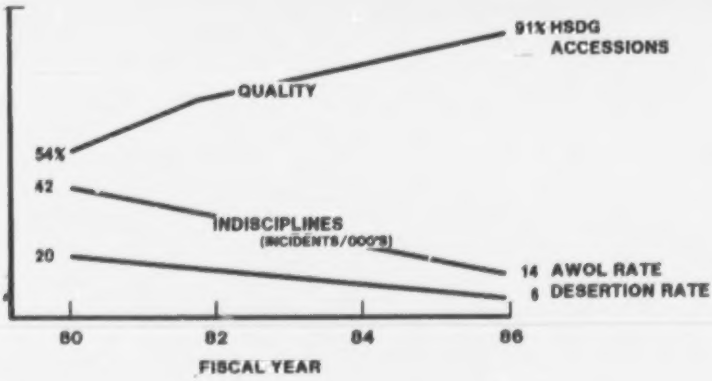
General WICKHAM. Landpower changes history. It has a broad spectrum of responsibility as the Secretary indicated and, to use the phrase from the Orient, "Always prepared, no misfortune." That is what our job is.



REAL GROWTH EXCLUDES MILITARY RETIRED PAY ACCRUAL

Getting to Senator Nunn's question, the Army is doing well in terms of resources. But we have more to go. If you take a look at the period of the time from 1970 on, percentage change on the left there, you see that the Army for about a decade lived off the shelf with very little net investment. As a matter of fact, since 1970 we have had negative growth of about minus point 3 percent. It is only recently that the Army has begun a modernization effort and that effort needs to continue. That is what we are talking about. This budget is part of that continuing effort. It is not at the higher level we started. This 5.6 percent is going into the Congress. These figures represent what came out of the Congress.

QUALITY vs INDISCIPLINE
ACTIVE COMPONENT



QUALITY OF SOLDIER

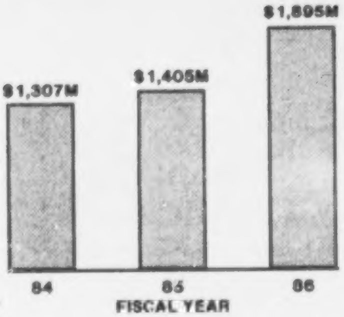
As the Secretary indicated, this is the best Army I have seen in 35 years as a soldier. Part of that is because of the quality of the people coming into it, high school diploma graduates, young people who are achieving, anxious for the challenges that they face. This chart represents low rates of indiscipline for AWOL and desertion.

We appreciate the solid support of the Congress. The incentives have been given to us to attract quality young people and the incentives are given to us to keep them in the Army. If I could leave one charge with members of the committee as you look at this budget, it is that people matters are the most important in terms of the Army and its ability to fulfill the missions facing it.

ARMY FAMILY PROGRAM

Half of the Army is married. We have 700,000 children in the Army, half of them under the age of 6. Half of the wives work. So, if we are concerned about readiness in the Army, which is our most important business, we ultimately must deal with families and quality family support. Clearly, the better the family feels about the Army, the better the soldier feels about it and the more productive he or she is going to be.

ARMY FAMILY PROGRAM



FAMILY HOUSING

CHILD CARE

COMMUNITY SUPPORT

YOUTH ACTIVITIES

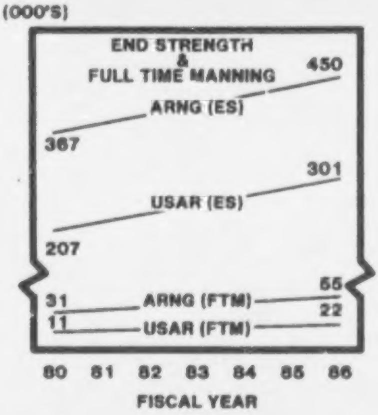
SOLDIER/FAMILY SERVICES

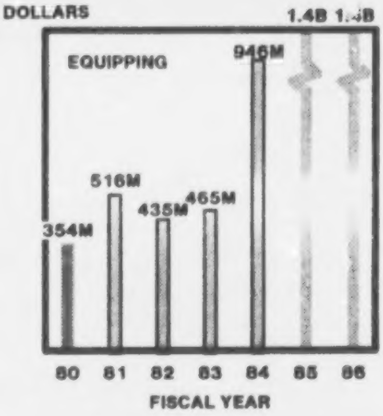
. . .THE STRONGER THE FAMILY

. . . THE MORE READY THE ARMY.

This chart shows the growth in resources with the Congress' support from fiscal year 1984 to 1986, devoted to family programs. The bulk of the increase is for family quarters.

RESERVE COMPONENTS



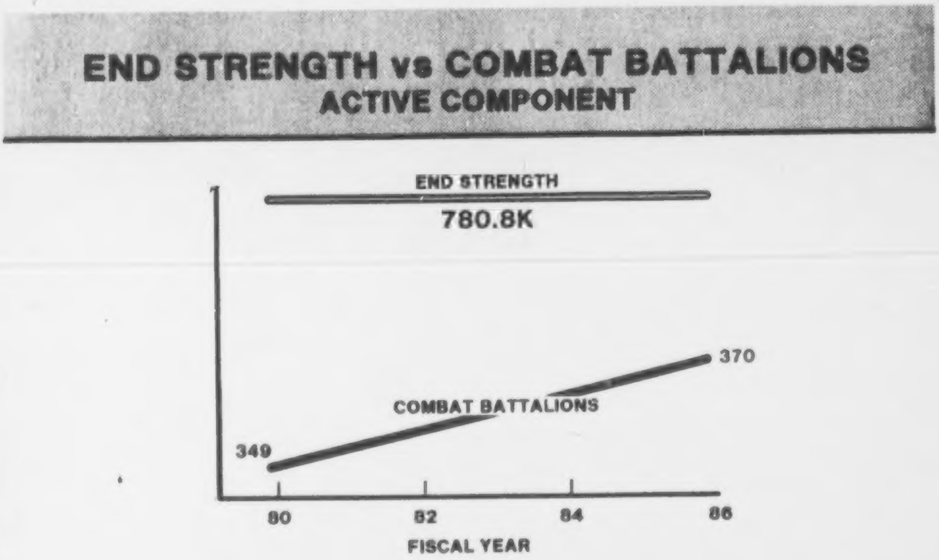


As the Secretary indicated, I think that is a success story. We have been substantially improving the capability of the Reserve components while the active Army is maintained at a flat end strength. We are emphasizing this point, growth in the end strength of the Army Guard, growth in the end strength of the Reserve, and we are also putting resources into full-time manning, the technicians plus the active Guard and Reserve.

You see full-time manning of 55,000 in the Guard and about 22,000 in the Army Reserve. We are going to 10 percent full-timers, ultimately higher than that in the outyears. We have to do that if we are going to put all this modern equipment in the Guard and Reserve. We have to put full-time people in the Guard and Reserve to capitalize on the opportunities.

This shows what we are doing in terms of equipment. You see the substantial jump in 1984, almost a billion dollars of new and displaced equipment going into the Guard and Reserve and $1.4 billion in each of the following 2 years. That is also projected in the outyears.

The first to fight are the first to get the new equipment. Guard units are getting M1 tanks ahead of active units if they are the first to fight. So, I think that is a success story. It is paralleled in terms of the overseas deployment. We have Guardsmen down in Panama building roads as part of their deployment exercises and training.



ACTIVE COMPONENT COMBAT BATTALIONS

I think this is another success story. It gets to the point of Senator Nunn. What are you doing with all that money that goes into the Army? We are holding the active end strength constant. Demographics argue we should do that and also Congress has been urging us to do more with Reserve components.

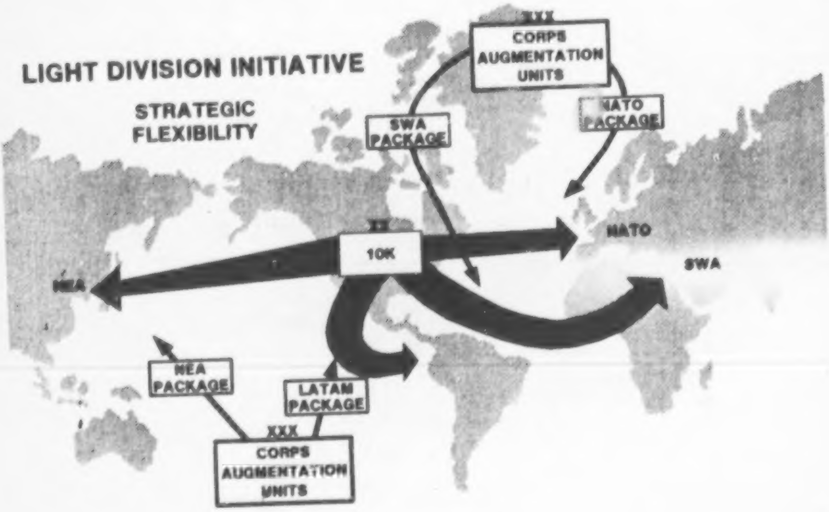
While we are holding the active strength constant, look at what is happening to the combat battalions we are creating. They increase from 349 to 370. It is not done with mirrors. We are capitalizing on productivity and technology to take people out of administrative tasks such as message centers and supply systems, and put them into combat capability. The 21-combat battalion increase is how we are creating these two additional light divisions. We needed a home for them, so we put them in a division structure.

This is going to continue. That is not the end of it. That line is going to go on up beyond here.

FORCE STRUCTURE

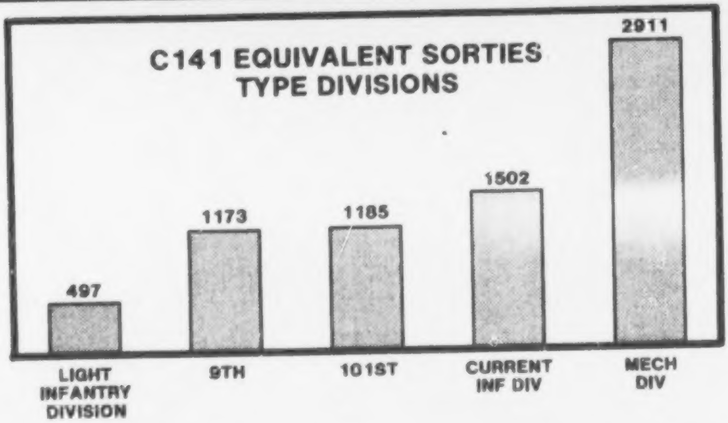
We are trying to maintain a solid balance between the heavy side of the Army oriented toward NATO and the lighter side of the Army that is capable of deploying elsewhere in the world.

That gets to Senator Thurmond's point. We are talking about a few light divisions in the Army. The heavy structure of the Army is still oriented toward NATO, but the light side of the Army has a responsibility to be prepared to deploy anywhere around the world for reinforcement purposes.


LIGHT DIVISION INITIATIVE
STRATEGIC FLEXIBILITY
XXX
CORPS AUGMENTATION UNITS
SWA PACKAGE
NATO PACKAGE
XX
10K
NATO
SWA
NEA
NEA PACKAGE
LATAM PACKAGE
XXX
CORPS AUGMENTATION UNITS

We have two new light divisions that we are organizing, one at Fort Drum and one in Alaska. They are 10,000 soldiers strong. The reason we have fighting capability with that small type of division is that half of it is elite infantry. We can move these divisions very rapidly anywhere in the world, as indicated here. If they need augmentation because of required mobility or firepower, those capabilities are in the Guard and active structure. As a matter of fact, this light division has great utility in NATO. Seventy percent of the European countryside is not suitable for armor. The German Army is beginning to look very carefully now at light forces. The French have already organized five light divisions. The Italians are looking at them and the Koreans are looking at them also.

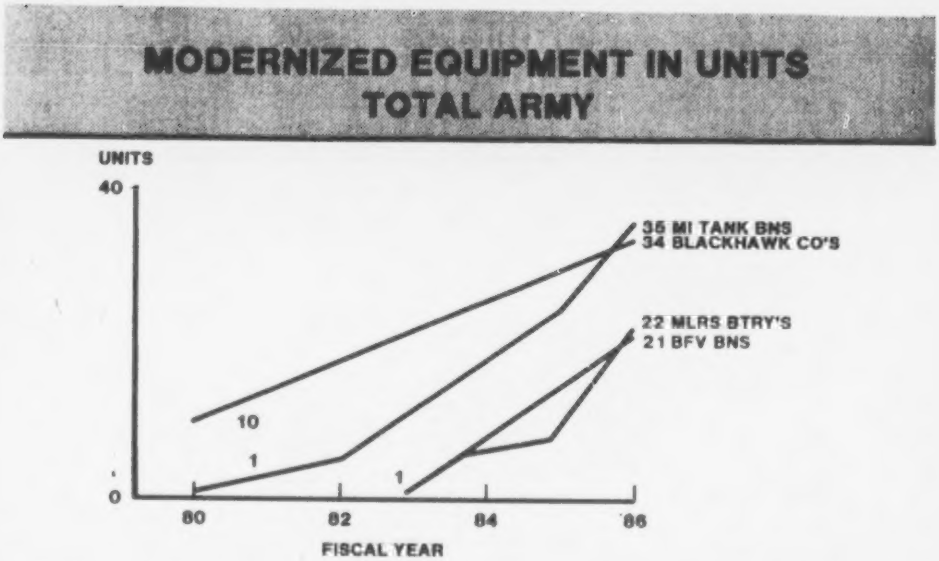
STRATEGIC DEPLOYABILITY



One of the reasons that the light divisions are so compelling is in terms of their ability to get around the world. We are not light any more in some of our divisions. This illustrates it: Current infantry division, 1,500 C-141 sorties to go anywhere. That is 2 to 3 weeks of airlift to move it. For the 101st, it is about 1,200, for the 82d it is the same, and for the 9th Division at Fort Lewis, still about that high. We are going to keep these light divisions under 500 sorties. They will also have a higher fighters to support ratio than any of these other divisions.

MODERNIZED EQUIPMENT

Another question that Senator Nunn raises is where is all this money going in terms of capability? We are not only compensating for living off the shelf, but we are putting it into firm combat capability.



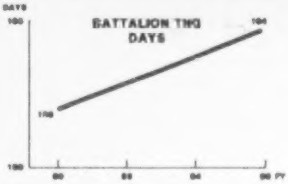
MODERNIZED EQUIPMENT IN UNITS
TOTAL ARMY

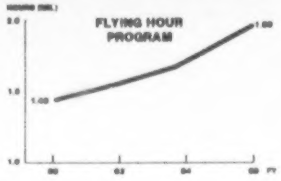
This is what we will have done in terms of types of units by 1986. We will have 21 Bradley fighting vehicle battalions equipped with new vehicles and 22 multiple-launch rocket system batteries. This is a powerful battery. One battery of nine launchers in one salvo has the same effect as three battalions of 8-inch artillery. That is a substantial increase in capability. Blackhawks, there are 34 new companies. There are 35 M1 tank battalions. As General Vessey indicated in his testimony yesterday, the scores of tank gunners with the M1 tank are 46 percent higher than scores with the M60A3. So, these are substantial capabilities that are available to us.

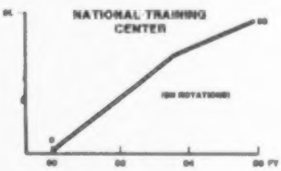
In addition, we are moving in the direction of improving air defense with the Patriot system and the Hawk, the improved Hawk system. The Divad—division air defense—is a controversial system that is undergoing tests now with final field operating tests with soldiers from the active force. If those tests come out well, then a decision may be made by the Secretary of Defense to continue with the production. If those tests do not work well, then we are not going to buy it. We will have to go to some alternative because if there is a gap in our capability in Europe with all of the heavy equipment, it is in the short-range air defense area. We need the Divad or something like that to fill that gap. There are two other items of equipment that we have not touched on here and I think are important for me to make a note of.

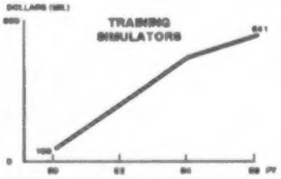
One of them concerns what is called the mobile subscriber equipment. It is nothing more than a secure cellular telephone applied to the battlefield of Europe. We are looking at the British and the French system as a basis for acquiring that capability. The second concerns the LHX, the light experimental helicopter we are developing to replace the multiplicity of helicopters that exist in the Army today.

TRAINING READINESS









Training readiness, resources going into improving our readiness. If you look at the number of training days per battalion, you see there has been an increase over the years. That is real solid training going on. That is the growth represented here.

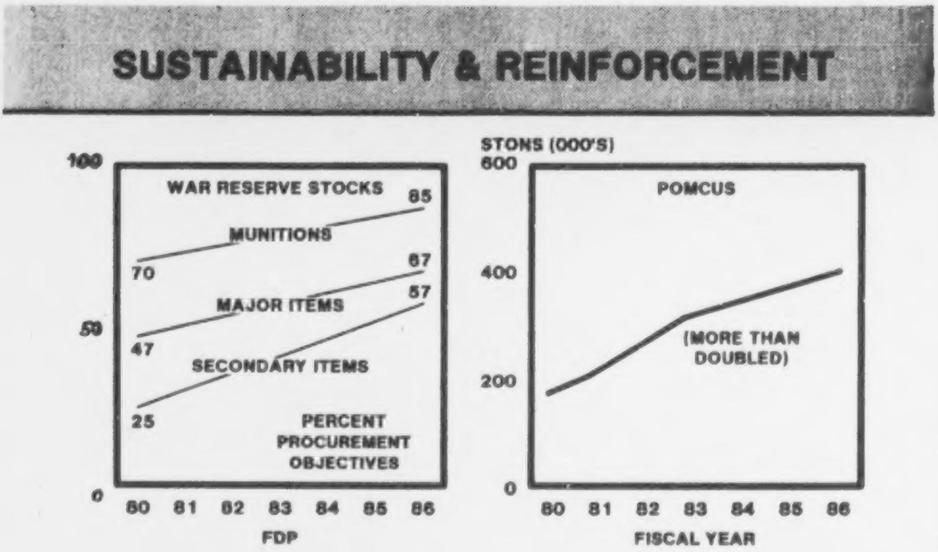
The flying hours program is growing from 1.5 million hours up to 1.9 million. If you lay on that the accident rate, the rate is down. There is a direct correlation between flying hours and readiness and accidents. The Chairman knows that.

THE NATIONAL TRAINING CENTER

I report it is the best training center in the world. We took a defector involved in training from the Soviet Union out there. He looked at it and said it is the best thing he has seen. The National Training Center has increased from zero up to 28 battalion rotations. That includes five Guard rotations in fiscal year 1985. They are doing very well in their training out there.

Training simulators. The investment is increasing from $100 million in 1980 to over $500 million in simulators. Big news in simulators: The training simulator we are putting with the M1 tank battalion, every battalion gets a training simulator, that pays for itself in 3 years with ammunition saved.

Simulators with artillery, 155 artillery, are saving us 100 rounds per tube per year out of an original requirement of 332 rounds. So, there is good news in this and there is more that can be derived in terms of efficiencies.



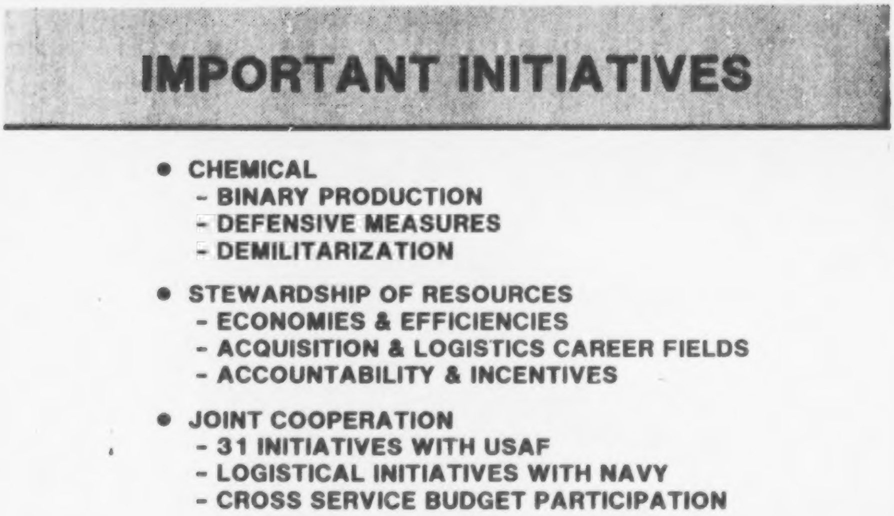
What we are doing in the way of reinforcing our capability to sustain ourselves in war. Here is where we are putting resources that don't necessarily show up, Senator Nunn.

In munitions we are moving from 70 percent of our procurement objective supporting the wartime requirement up to 85 percent over this 4-year period. That is munitions projected for pre-positioning overseas in Korea and in Europe.

Major end items—these are tanks and artillery pieces—growing from this level up to 67 percent of our procurement objective.

Secondary items—it may be difficult to see that—moving up to this level, about 57 percent. These are engines and transmissions.

The pre-positioned operational materials configured to unit sets—POMCUS—are basically the six division sets of equipment that we are supposed to have in Europe to meet the 10 divisions in 10 days requirement laid on us by NATO. We have significantly increased the amount of equipment we have deployed overseas in the pre-positioned sites that have been built for us by European countries.



IMPORTANT INITIATIVES

- CHEMICAL
  - BINARY PRODUCTION
  - DEFENSIVE MEASURES
  - DEMILITARIZATION
- STEWARDSHIP OF RESOURCES
  - ECONOMIES & EFFICIENCIES
  - ACQUISITION & LOGISTICS CAREER FIELDS
  - ACCOUNTABILITY & INCENTIVES
- JOINT COOPERATION
  - 31 INITIATIVES WITH USAF
  - LOGISTICAL INITIATIVES WITH NAVY
  - CROSS SERVICE BUDGET PARTICIPATION

Three last points I leave with you concerning chemicals. The Secretary talked about that. The binary production is absolutely essential. Only 10 percent of our stockpile is militarily useful. It is criminal to send our soldiers to a conflict situation where we do not have a retaliatory capability that can deter Soviet use of chemical weapons. We know they are building them in substantial quantities. We have some resources, about $160 million, in the 1986 budget to begin the production of binary 155 artillery shells and the Bigeye bomb.

There are substantial resources in the budget also in defensive capability, passive capability, and also for demilitarization of the stockpile we are no longer using.

Stewardship of resources. It would be unfortunate if the Secretary and I did not talk about stewardship of resources. He and I take seriously our responsibilities to be sure we give the taxpayers the most for the dollar.

Economies and efficiencies. We expect in the next 5 years to save something on the order of $9.9 billion in the Army budget through cost avoidance brought on by efficiencies and economies. Some of that comes from multi-year procurement.

We testified about acquisition and logistics career fields. The chairman talked to me about that. You need to build a career opportunity for young soldiers to stay in the program management and logistics fields. We have done that. The Secretary and I, in giving guidance to promotion boards, direct them to pick so many people who have been project managers or logisticians so that a young officer can stay in that kind of field and rise up to General rank.

As a matter of fact, the Commander of Army Materiel Command, a career logistician symbolizes our commitment to do a better job in this whole area of acquisition and management.

Accountability incentives. We are encouraging people to call in on hotlines when they find prices of parts are wrong, and encouraging people to come up with suggestions to improve our ability in this area. We have a hotline now on spare parts. The phone calls run 500 a month and most of them indicate there is something wrong with the supply system which we then get fixed. We saved in the parts business alone about $184 million last year, 1984, through tightening up our whole approach toward acquiring parts.

Joint cooperation. Senator Nunn mentioned it. Last fall Gen. Charles Gabriel and I got a group together to look at roles and missions between the Army and the Air Force. This group recommended some 31 initiatives where we can avoid cost and avoid duplication.

General Gabriel and I are signed up for virtually all of those and there is substantial good news to be derived in terms of cross service cooperation. We have done a similar thing with the Navy in logistics over the shore and sealift capability.

We now have formalized in the Army and the Air Force general officers sitting in on each other's budget meetings throughout the whole preparation process. So that where there are disconnects, they are resolved. So, I think there is good news to say about cross service capabilities.

THE ARMY'S RESPONSIBILITY IS TO BE . . .

- READY
- FLEXIBLE
- STRATEGICALLY DEPLOYABLE
- TECHNICALLY COMPETENT
- TACTICALLY SOUND
- SUSTAINABLE

. . . WITH QUALITY PEOPLE
& EQUIPMENT . . .

AND SUPPORT FOR THE FAMILY.

ARMY'S RESPONSIBILITIES

To summarize. That is what the Army needs to be. Ready, flexible, strategically deployable, technically competent, tactically sound, and sustainable with quality people and equipment. You have helped us to do all of that. We ask you to continue that solid support.

Thank you very much.

[The prepared statement of General Wickham follows:]

PREPARED STATEMENT BY GEN. JOHN A. WICKHAM, JR., CHIEF OF STAFF, U.S. ARMY

Mr. Chairman. Members of the Senate Armed Services Committee. Thank you for the opportunity to testify on the FY 86 budget. My brief statement provides a status report and builds on Secretary Marsh's remarks which I fully support.

As you know, the peacetime demands for Army readiness have never been greater. (Vu-graph #1). The Army must be prepared to cope with a broad spectrum of threats to our nation's security ranging from terrorism and low-intensity conflict to conventional, and even nuclear, warfare. History tells us that being ready for war is the best way to deter it. In an age of strategic nuclear parity, landpower has become increasingly important as a greater share of the burden of deterrence shifts to modern conventional ground forces. Landpower provides both a deterrent and a war fighting capability, and, thereby, raises the nuclear threshold.

My recent visits to our forces worldwide confirm that today's total Army is better than last year and substantially more capable than four years ago. However, more remains to be done. As you can see by this Vu-graph (#2), we "lived off the shelf" in the 1970's. This year, we are requesting $82 billion dollars to continue the essential programs for improving the quality of our forces, for strengthening readiness, for equipment modernization, and for expanding our capabilities to sustain operations.

Readiness is our most important task. Today, we have quality soldiers, the best I've seen in 35 years of service. This Vu-graph (#3) shows the trends of "quality vs. indiscipline," key measures of personnel readiness. The trends are extremely favorable. However, if we are to assure a high state of readiness, we must continue efforts to attract and retain quality people in the Army. The Congress has provided solid support and as you deliberate on this year's budget, I urge you to look favorably on people programs which include housing, pay, recruiting and reenlistment incentives, and family support.

Our 1984 theme was the Army family. It recognized that the total Army is, first and foremost, people. Fifty-four percent are married. We have 1,200,000 family members, including over 400,000 spouses and 700,000 children (almost half the children are under the age of six). We must provide adequate housing (expecially in high cost areas), health care, child care, schooling, and comparable pay and benefits. This Vu-graph (#4) shows what we have accomplished so far. More must be done. The readiness of the Army rests on quality soldiers and their families who feel good about the Army. We must make the most of our human resources. In that regard, the Army theme for 1985 is "leadership." Enhancing leadership provides a tremendous return on investment.

We will continue to rely on Reserve component units. This Vu-graph (#5) shows the trends. Their strength is up significantly, and full-time manning is growing to support modernization efforts. Training has become more extensive and demanding, including increased deployments for selected Reserve units to the National Training Center and to overseas locations. The Reserve components are getting better equipment. For example, 17 tank battalion equivalents of M1/M60A3 equipment are in this budget for the Reserve components. In 1984, the Reserve components received over $900 million of modernized equipment; and, they will get about $1.4 billion each year in fiscal year 1985 and fiscal year 1986.

In the Active Forces, we are embarked on a program that maintains a constant end strength and a proper balance in our force structure between heavy and light forces. This Vu-graph (#6) shows how we have increased the number of combat battalions in the force while maintaining a constant end strength. Internal restructuring efforts, along with unit productivity and technological enhancements, have freed up sufficient manpower to form these additional combat battalions, and more will be formed in the years ahead.

Capitalizing on this additional combat capability, several light infantry divisions will be formed. The 10th Mountain Division at Fort Drum, New York, the 6th Division in Alaska, and the 29th Division in the Army National Guard. Two standard divisions are being reconfigured to light divisions, the 7th Division at Fort Ord, California, and the 25th Division in Hawaii.

The light division initiative, as shown on this Vu-graph (#7) gives us increased strategic flexibility. With about 10,500 soldiers each, the light divisions will have a higher "fighter-to-support" ratio than existing divisions. They will have the ability to deploy three times faster than the standard infantry division, taking into account the limits of existing air and sealift resources. This Vu-graph (#8) shows the increased deployability of the light division. Early, rapid, strategic deployment greatly enhances our deterrent and war fighting capability. We are working closely with our sister services to close the shortfalls that now exist in our strategic mobility.

The design of our heavy forces is being streamlined. The leader-to-led ratio will be increased and more combat power will be provided to the corps commanders as required by airland battle doctrine. We also improved and expanded our Special Operations Forces last year by activating a third Ranger Battalion, a Ranger Regimental Headquarters, and a Special Forces group.

We continue to modernize the equipment of the Active component, particularly the heavy forces of the Army which are NATO oriented. In the total Army, for example, over 2,300 Abrams tanks, 1,400 Bradley fighting vehicles, 100 multiple launch rocket systems and 600 Blackhawk helicopters have been fielded and all of these systems maintain a higher operational ready rate than the system they replaced. This Vu-graph (#9) shows the increases in units that have received modern equipment. Key research, development, and acquisition programs in the budget include the LHX helicopter and mobile subscriber equipment.

Modernization of our air defense and chemical capabilities is very important. The recent fielding of the first Patriot air defense battery is the initial step in modernizing the high-to medium altitude air defense capability of NATO. We also must continue our efforts to find a suitable low altitude air defense weapon to field with our heavy forces. Modern air defense is a major gap in our heavy forces. You have my assurance that no system, including the Divad, Sergeant York, will be recommended for fielding unless it has demonstrated that it performs as intended.

We lack a credible chemical warfare deterrent. (Vu-graph #10). Our Nation's defense posture and the recent improvements in our total military readiness could be jeopardized by this single factor on the modern battlefield. We must modernize our deterrent stockpile with binary chemical munitions and rid ourselves of the obsolete and potentially hazardous chemical munitions we currently store.

We are emphasizing the stewardship of resources that are entrusted to us. Vu-graph #10). We have a number of initiatives underway that will improve the acquisition process, force modernization and integration, and resource and information management. I am totally dedicated to assuring that the American taxpayer gets maximum value for the dollar.

In the same vein (Vu-graph #10), last year I signed a memorandum of agreement with General Gabriel, Chief of Staff of the Air Force, that improves coordination on programmed budget priorities, eliminates duplicative functions, and improves joint capabilities in peace and wartime. Similarly, the chief logisticians of the Army and the Navy signed an agreement to strengthen their joint cooperation and improve strategic sealift programs. Service programmers have also signed agreements that improve cross-service participation in the budget and program process. All of these initiatives need congressional support if they are to achieve their fullest potential.

Training readiness has improved greatly over the past 4 years. This Vu-graph (#11) shows the progress we are making in terms of battalion training days, flying hour programs, training simulators, and the National Training Center. The trends are up.

The sustainability of our forces, as shown on this Vu-graph (#12), continues to improve. Increasing the prepositioning of equipment in Europe (POMCUS stocks have more than doubled since 1980) and Korea has reduced deployment times and strategic lift requirements. A greater inventory of war reserve stocks will help sustain our combat efforts until the Nation's production base can accommodate wartime resupply demands. Gains have been made in these areas; however, we must continue to rectify the shortfalls.

Our emphasis for the remainder of the decade envisions six key objectives: to maintain a steady Active component strength, to expand our Reserve component strength, to care for the people and equipment we have, to refine our force structure to enhance readiness, to modernize and fill key voids in combat capabilities, and to improve sustainability of the force.

The total Army responsibilities are shown on this Vu-graph (#13).

We are creating a "28-division total Army" that, in strategic terms, has more utility across the entire spectrum of conflict. Today's Army is proud and ready, and is preparing to meet tomorrow's challenges. With your continued support, we will fulfill the important missions entrusted to us.

Thank you.

Chairman GOLDWATER. Thank you, General.

Senator Thurmond.

SECOND SOURCE M1 ENGINE

Senator **Thurmond**. Mr. Secretary, the Army has desired to compete for a second source for the tank engine for the M1, but has been prevented from doing so in the past.

In light of the fact that the M1 tank purchase is about one-third complete and the time and tooling up costs associated with a second source, would it not be more cost effective to complete this buy on a sole source basis?

Secretary **Marsh**. The point you make is well taken. Some consideration is being given to the possibility of trying to come up with a sole source producer in order to effect savings. However, I would not want to say we have abandoned our desire to still try and initiate competition for a second source.

The question does occur now whether or not there will be a savings realized if we do initiate competition. If not, we will see what we can do with multi-year procurement.

LIGHT DIVISION

Senator **Thurmond**. General Wickham, do you really need what will be, in essence, seven light divisions?

General **Wickham**. We will have 18 divisions in the active Army. The bulk of them are oriented toward NATO. The light divisions that we have include the 82d, the 101st, 10th Mountain Division going into Fort Drum, the 2d Division in Korea, the 25th Division in Hawaii—and you can see the obvious utility of light divisions in that part of the world—the 6th Division in Alaska which is a theater defense division oriented toward defense of Alaska and the 7th Division at Fort Ord, CA. All of those divisions are within the 780,000 end strength Army. There is no change.

You mentioned in your opening statement that we are changing the structure of the 82d and the 101st. They are already light divisions. What we are doing is capitalizing on our AirLand Battle Doctrine where we give the corps commander greater capability. Those divisions are going down somewhat in capabilities to move those capabilities to the corps for its flexibility. That is the basis for the restructuring that is going on within the Army.

Senator **Thurmond**. I guess you have given consideration to whether you would rather have the seven light divisions or perhaps two with enough airlift and sealift to meet our wartime requirements?

General **Wickham**. There is a JCS requirement for division structure in the Army. We have, with our Guard divisions and with the active divisions, including the new light divisions, 28 divisions.

ARMY/AIR FORCE INITIATIVES

Senator **Thurmond**. Our Chairman, Senator Goldwater, and our ranking minority member, Senator Nunn, have been leading proponents of "joint" systems as a way of improving our conventional combat capability.

Additionally, the Army and the Air Force are to be commended for their efforts in forging a closer working relationship.

It is my understanding that Secretary Taft has canceled one of your initiatives. What is the status of the remaining initiatives and are any in contention?

General WICKHAM. No, sir; the remaining initiatives of the 31 are all basically in good health and will be implemented. The bulk of them I think are implemented now.

The initiative that Mr. Taft raised concerns about dealt with the transfer of rotary wing Special Operations Forces aircraft to the Army. There is no question that the Army should have the mission of inserting Special Operations Forces by helicopter. We will acquire that mission as we acquire aircraft to do it.

The specific concern that he voiced dealt with the transfer of the Pave Low, which are HH-53 helicopters, from the Air Force to the Army. That will not take place. Those aircraft, which are also search and rescue aircraft, will remain in the Air Force while the Army gradually builds a helicopter capability. Even though he adjusted the transfer of the aircraft, the mission will still go to the Army. That initiative, I would say, is still alive.

CHEMICAL WEAPONS

Senator THURMOND. General, I was very much impressed with what you had to say about chemical weapons. To me it is absolutely foolish not to go forward with these binary weapons. The only reason that gas was not used against us in World War II is that we could retaliate.

Do you agree?

General WICKHAM. Yes, sir.

Senator THURMOND. It may not seem clear to some people that having chemical weapons is a way to avoid use of those weapons by the enemy. I want to ask you this question.

How does a lack of credible chemical retaliatory capability impact on the necessity to use tactical nuclear weapons?

General WICKHAM. There is a relationship. We would obviously have to use these kinds of weapons, tactical nuclear or chemical weapons, in retaliation or if we were unable to staunch the tide of attack by conventional means, as General Rogers has indicated.

If we do not have a chemical retaliatory capability, the effect that the enemy could wreak on our allied forces with nuclear weapons and chemical weapons of his own would be catastrophic. By having a chemical capability to deter, we believe contributes to our ability to deter across the spectrum of conflict in Europe and also to our ability to sustain ourselves conventionally.

SPECIALIST CAREER FIELDS

Senator THURMOND. On the stewardship of resources which you showed on the chart I believe you indicated it would be possible for an individual to pursue his career where he can become a specialist and rise in rank just the same as if he had to go through all the different paths and not be a specialist in any. That would seem to make sense.

General WICKHAM. Yes, sir; as an illustration, in the oral guidance to the Brigadier General Selection Board that the Secretary and I convened, we directed that board last year to pick six officers who are in the program manager field, plus additional officers in the logistics field, a total, I think, of roughly 12. Many of those officers had not commanded the kind of units that we traditionally think one commands, a battalion or brigade. They are specialists in their own right. The fact that we have picked General Thompson as our new Army Materiel Commander has sent an extraordinary signal to the Army logistics and acquisition officers by demonstrating to them you can rise to four-star rank in the Army if you are able and want to specialize in this area.

I think ultimately that is going to lead to better efficiency in the way we use resources.

Senator **Thurmond**. That should be very encouraging to officers who wish to devote their career to being specialists rather than having a diversified career.

General **Wickham**. Yes, sir.

LODGE ACT

Senator **Thurmond**. Now I want to mention this. I have introduced legislation that will bring back what is known as the Lodge Act. This bill would grant the Secretary of the Army authority to enlist certain male aliens who are single and have no dependents.

The purpose is to improve the shortfalls in geographic and language expertise in our special operations forces.

Would you please review this legislation and advise the committee concerning the possibility of its enactment.

Secretary **Marsh**. We will be happy to review it, Senator, and give you a report on behalf of the Department. It is one that will have to be staffed through the Department of Defense because I suspect Defense will also take a position on it.

Senator **Thurmond**. A great many people feel this will be very helpful. I want to get the Army's reaction.

We are glad to have you with us. I want to commend you both for the fine job you are doing.

Secretary **Marsh**. Thank you, sir.

Chairman **Goldwater**. Senator Nunn.

INTEROPERABILITY

Senator **Nunn**. Thank you, Mr. Chairman.

General Wickham, what would happen in a NATO war if our allies run out on ammunition? What will be the position of the U.S. Army in Europe if our allies within days, not weeks expend most of their ammunition for most of their systems?

General **Wickham**. The practical dimension would involve some cross servicing from our own ammunition to allow flank units to sustain themselves, but even then we would run out of ammunition in a matter of days. That would lead to General Rogers' conclusion on the need to request the use of nuclear weapons, tactical nuclear weapons to avoid defeat.

Senator **Nunn**. Are our systems interoperable? Do we have many systems where we can exchange ammunition with our allies?

Just in general. I am not asking you to be specific.

General **Wickham**. There is general interoperability in air weapons, air munitions, and a general interoperability in small arms and anti-tank systems. There is not necessarily interoperability in tank ammunition. The Germans have 120mm guns. We are only moving into the 120mm with the M1A1 tank. So interoperability does not exist across the board.

Senator **Nunn**. Can you furnish for the record an analysis of those U.S. and allied systems where ammunition is interoperable?

General **Wickham**. Yes. Artillery is the biggest interoperable area.

[The information follows:]

AMMUNITION INTEROPERABILITY

The United States is lead nation for NATO's catalog of interoperability ammunition. The document, AOP (Allied Ordnance Publication) -6(C), Land Forces Ammunition Interchangeability Catalog, is over 100 pages in length. It has been provided to the Senate Armed Services Committee.

Senator **Nunn**. And in the rest of the systems we don't?

Chairman **Goldwater**. If you will allow me. With that information, would you give us an approximation of how many days of ammunition you have in NATO?

General **Wickham**. Yes, sir. We can do that by allies to the extent we know fully and also with our own.

Senator **Exon**. I believe that is classified information.

General **Wickham**. That is classified information, but I will provide it for the record.

[The information follows:]

DAYS OF AMMO

As of December 31, 1984, U.S. Army munitions on hand in NATO were estimated to be [deleted] of supply overall. This determination was based upon near term requirements to execute a global illustrative planning scenario for U.S. forces.

The munitions status of our NATO allies (Ground Forces) as of end of fiscal year 1984 is relected below by the two primary categories of munitions sustainability for which data is available. (Figures reflect percent achieved as a function of [deleted] Shape Guidance.)

	Artillery	Tank gun
Country		
Belgium	[Deleted.]	
Canada		
Denmark		
Germany		
Greece		
Italy		
Netherlands		
Norway		
Portugal		
Turkey		
United Kingdom		
Total Non-United States		

* No computed country requirement

DETERRENCE AND BUDGET PRIORITIES

Senator **Nunn**. During a period of limited budgets, distasteful as it is to this committee, we are going to have to prune back some in the overall military budget. We must ask why the United States should have as a priority greater sustainability objectives in NATO with conventional munitions, when it is obvious that our allies are substantially below our levels, especially when it means that when they run out of ammunition, the war is over, or is escalated to nuclear exchanges?

Why are sustainability stocks beyond current levels a priority, when obviously our position will be irrelevant in terms of sustainability since the allies will give out long before we expend the current levels of munitions?

General **WICKHAM**. What contributes to deterrence is the question. Greater capability to defend yourselves over a longer period of time contributes to deterrence. The NATO goal is to reach an agreed upon number of days of supply. Most NATO allies are approaching that. The United States is far above that level. The commitment of the NATO allies to a 3 percent real rate of growth annually in their defense budgets involves adding to the conventional munitions stockpiling capability that will exist in Europe.

Senator **NUNN**. Let me offer a hypothetical example. If you were a Soviet military man and you thought the U.S. Army could fight 75 days with everybody all around them giving out in about 10–15 days, if that was the general situation, would that add to deterrence, in your view, if you knew that all the flanks were going to be completely out of ammo in just a few days, the U.S. Army was going to be sitting there with 75 days of supplies trying to ship small arms ammo all over the front in a very heavy World War III type environment?

General **WICKHAM**. It would not contribute much to deterrence. To the extent they add to it year by year, it would contribute to deterrrence.

In the hypothetical example you pose, it would make better sense for us to have fighting capability than stockpiling ammunition so that we can fight a more intensive fight earlier through the use of more artillery, and more tank and infantry battalions.

You are raising the question between the balance of modernization and equipping of the force versus sustaining capabilities. In that kind of circumstance I think it does make some sense to move more into the modernization.

LIGHT DIVISIONS

Senator **NUNN**. Let me ask another question.

You mentioned that we are moving more toward light divisions. I happen to think that is healthy. I will have several detailed question for the record on some points that need clarification.

Nevertheless, generally speaking, I agree with the Army's move in that direction.

You mentioned the Germans and French and Italians were also moving to light divisions. The latter I don't mind, but I am concerned about the Germans and the French. It seems to me that our European allies ought to be increasing their armor combat capabilities, both to compensate for U.S. departures and to handle a lot of area contingencies.

Is it encouraging that our allies are also moving toward light divisions when they are sitting there in the region, when they don't have to have the sealift or airlift to get them there?

It seems to me that is in the opposite direction from what we would want.

General **Wickham**. I can't speak for the French operational plans, but the attitude of the French is to move rapidly into Central Europe as well as elsewhere where French interests might be affected.

Senator **Nunn**. I understand the French are not on the forward line. Let us speak to the Germans.

General **Wickham**. The Germans, recognizing that 60 to 70 percent of their terrain is not suitable for armor, feel there may be something to be derived from having additional light capabilities within their forces that could free up heavier forces to strike. The First German Corps is a case in point where they plan to change the location of some of their light reserves into forward areas to capitalize on obstacles. I don't think it is a wholesale movement in the German Armed Forces.

What we are trying to do is capitalize on the synergism from light and heavy forces in combination.

Senator **Nunn**. It is sensible for the United States to move to lighter forces when we look at the enormous deficiencies in sealift and airlift, and when we look at the terrible logistics problems we have in getting forces that are heavy to remote regions like the Persian Gulf. But it seems to me what we ought to be encouraging our allies to go as heavy as possible and let us, with our terrible logistics problem be the light forces.

If the Germans think that a mix of light and heavy forces is legitimate, we ought to offer to be the light forces rather than have the Germans restructure their forces to incorporate light divisions.

Since the Germans are right there on the front with all the equipment, all the manufacturing capability and no problem getting tanks there because of their close proximity, I don't understand why they should go light. We have to since we are trying to transport equipment 3,000 or 4,000 miles from home.

It seems to me that this trend on their part is terribly counterproductive. I am not saying that identification of areas that don't require armor is wrong. The Germans may be right on that.

Why should they be the ones to lighten up their forces?

General **Wickham**. I may have misled you, sir. I don't believe the Germans intend to form additional light forces. They plan to make greater use of light ones they do have in the operational plans to capitalize on that synergism.

Senator **Nunn**. Would it make sense for us to try to get them tc heavy up the light forces they have and for us to be the light forces there?

We saw a chart yesterday. This is what disturbs me about the NATO production rates and the Warsaw Pact production rates. We have seen the defense outlay. We have seen these charts every year. Yet there is nobody that can tell us that 10 years from now those charts are going to look any different.

We are not getting anywhere unless we start behaving as an alliance. I know you have enough on your hands without taking on the Germans, and I am not asking you to do that. I am not in any way blaming the U.S. Army for that.

I am asking for your opinion because somebody at high level will have to start paying attention to this.

General **Wickham**. The Germans have moved in that direction. They have given up the light brigades that they originally had and moved to mechanized and tank brigades. I was referring to the airborne elements that they are now capitializing on by putting them in forward areas where tanks can't maneuver to free up tanks for use in the reserve or counterattack structure. They are doing exactly what you are pointing out, the need for heavier forces because of their preponderant role in defense.

Senator **Nunn**. Thank you. My time is up.

Chairman **Goldwater**. Senator Exon has a time problem. He has asked for 2 minutes. Without objection, he may proceed.

CHEMICAL WARFARE

Senator **Exon**. Thank you, Mr. Chairman.

I thank my colleagues. I will be very brief.

I feel better about things in the Army. I intend to work with you. I suspect, though, despite our difficulties and problems, you are satisfied with manpower as it exists today. We are coming along on a whole series of things and I salute the Army for their leadership under some rather stressful situations.

What I am most concerned with today, and I wonder if you agree, is one place where we do not have deterrence, which is tremendously important in the Army as well as in the Air Force, is chemical warfare. I think if there is one area where we are sadly outgunned by the Soviets, it is in chemical warfare.

I suspect the reason for that is basically we have not been able to sell the American people on it and through them a substantial number of their representatives in the Congress that that is an important deterrent.

I am not a military man, but from what I have read and studied about World War II, if Hitler had felt he could get by and if he could have won that war quickly and efficiently with chemical weapons, I don't think there is any question he would have tried it. Why not? He did everything else?

Are you as concerned about that as I am? Do you feel that our lack of capability in chemical weapons is an invitation to the Soviet Union to use them?

Therefore, I am wondering would you agree we must get the President of the United States more involved, with his communications skills, in communicating to the American people the need for a credible deterrent?

The President does an excellent job, too good a job, on the MX missile, in my opinion, and things like that, but he has not, in my opinion, spoken out as he might as the Commander-in-Chief on this.

Do you share my concerns about deterrence? What can we do to improve it?

General **Wickham**. Yes, we do share your views. Yes, the President is equally as concerned. Mr. Weinberger in his testimony yesterday said that it is a distasteful subject, but we must, nevertheless, point out this is a gross deficiency in our ability to wage war and deter hostility.

Part of the difficulty with the American people is that they don't understand that binary chemical weapons are stockpile safe. They are shelf safe and, therefore, we don't run into the problems of demilitarization that we do with the stockpile that we have now. We have already elaborated on this earlier and I would continue that.

Senator **EXON**. Do you think that the Commander-in-Chief might speak out a little more forcefully on this?

General **WICKHAM**. I wouldn't want to speak for him, sir, but I am sure he will in due course.

Senator **EXON**. Thank you.

I have no further questions. I appreciate your consideration, Mr. Chairman.

Chairman **GOLDWATER**. That is a very important point you made. Senator Cohen.

Senator **COHEN**. Thank you, Mr. Chairman.

I want to commend both Secretary Marsh and General Wickham for a mercifully brief and effective presentation. It is not always we get that kind of direct and succinct presentation on the goals and resources.

I should like to ask a couple of questions and I promise not to raise any issues about toilet seats today and their cost.

CHEMICAL WEAPONS

I would like to follow up on what Senator Nunn said, but in response to what Senator Exon was raising about chemical weapons, you used the phrase "stockpile safe."

I suggest to you one of the problems we have in communicating with the American people is that we don't use language they understand. "Stockpile safe" has a nice ring to it, but is rather meaningless.

If we tell the American people what we have on hand is in danger of leaking into the environment, I think then we might have a better reaction to why we have to replace what we have. This would show it as dramatic as it really is.

What problems have you encountered? I have seen some reports about difficulties in disposing of the current stockpile that runs the risk of leakage into the environment.

What kind of problems do you encounter trying to destroy what we have?

General **WICKHAM**. The Secretary can add to this.

We have problems, as you know, in transporting from sites across boundaries of States to other sites where we do the demilitarization. We do have systems that are leaking and have to be sealed until the time comes for demilitarization. There is no injury that is going to come from demilitarization processes. Basically, no emissions that will lead to environmental implications. As you point out, we ought to use a better phrase than stockpile safe. That is true. I used that as a sort of shorthand to convey to the members here who really understand the issue. You are right, we need a better public relations program to make the American people aware of the opportunities for deterrence and the necessity to build this kind of capability for our soldiers.

Senator COHEN. I just went through a campaign and one of the issues raised was the issue of chemical weapons. You should go out and explain it to the American people and say exactly what the problem is. You have to have a capability of deterring the use of chemical weapons, and most importantly, we have to have chemical weapons which are safe for us, there is a danger of leakage in our present stockpile and it does have to be replaced.

It should be replaced with something that is safe to store and ultimately to use, if we have to.

Secretary MARSH. Could I add to that response?

It is generally not known, but the Army in simply the executive agent for the Department of Defense. We act for the Department of Defense and it is a Defense problem.

Second, we have demonstrated effectively the demilitarization process which is currently operating. It has been demonstrated, it has been inspected and it is achievable.

Third, there is currently an assessment with an impact statement being prepared on how to handle some of these more critical weapons that must be demilitarized. That report will be due in January of 1986. It will relate to the M-55 rockets which are somewhat critical as far as we are concerned.

ADVERTISING AND RECRUITING

Senator COHEN. To both gentlemen I want to say I think that the Army has run very effective promotional campaigns, I think some of the best and most creative advertising I have seen. I assume it has had some positive results.

General Wickham, last year, as I recall, you testified that you were seeing some warning signs on the horizon, that there was a 22,000-man shortfall in the delayed entry pool and that was not a good signal in terms of what the future held for us.

What do you see now in terms of sustaining the kind of quality, not only in attracting young recruits, but in maintaining them?

General WICKHAM. Given the continued support of the Congress, the incentive for education, and incentives for reenlistment, we believe we can continue roughly the quality that we are getting now. That is another reason that the Secretary and I have decided to hold the Army's end strength flat. We can concentrate on reenlistment quality and enlistment quality. As I talk to recruiters in the field, they tell me, thanks to the Congress, that the incentives, the Army College Fund, and now the new GI bill, will be very helpful to us. The only difference now as opposed to a year ago is that we have to hustle more. We have to get out on the street and work harder to sign people up because the pool is coming down. The cohort of 17- to 19-year-olds which used to be at 1.3 million is now coming down toward 900,000. All the services will face the same difficulty of acquiring quality people. We think with this small Army and the continued incentives we can continue to maintain the quality.

MASTER RESTATIONING PLAN

Senator **Cohen**. With respect to what Senator Nunn was asking you concerning sustainability, I would like to get your judgment in terms of our posture in NATO.

In your judgment, are our troops and those of our allies situated in such a way that it gives the optimal or even reasonably good defensive posture against a Soviet thrust?

I am asking you about the Master Restationing Plan basically. I want to know what progress has been made and if any has been made, what do you recommend we do?

Not only do we have a problem in terms of sustainability or even in mobility, we also have a problem of forward line defense, as I understand it.

General **Wickham**. The Master Restationing Plan, as you know, does provide for movement of some of our forces that are now in the rear closer to their general defense positions. Some of that movement already has occurred as we have modernized our forces with Patriots and multiple launch rocket system batteries going into Europe. The Congress has funded the construction associated with that.

By and large, the German commitment to the Master Restationing Plan has not moved as much as we would have liked it to. Where they have moved their resources is into the overall NATO Infrastructure Program which has grown now to about $7 billion over 5 years. The German share of that is about 26 percent. They would argue that they have put their money into the construction program associated with NATO-wide capability as opposed to the Master Restationing Plan. So, I am not optimistic that we are going to see much progress in the Master Restationing Plan.

Even though you may fix the 7th Army, the U.S. Army, Europe, you still have other elements of Northag [Northern Army Group] and Centag [Central Army Group] that are still mal-deployed.

NATO BURDENSHARING

Senator **Cohen**. I just want to join in the suggestion that when we start talking about more communication with our allies, the need for developing a "credible coherent strategy," that we take those words seriously.

The fact of the matter is that we have nuclear weapons in Europe because at the time we introduced them they were to serve as a compensation for our conventional deficiencies, that democratic societies are simply unwilling to put up the cost of adequate conventional defense.

So we have that nuclear superiority. As that superiority has been eroded, then you have the fears that are genuine in Europe that they are now facing a conventional conflict.

The difficulty is that by the very inadequacy of that conventional defense, they make the probability of a nuclear or chemical war that much more probable.

So, you have this interesting paradox in which they don't want nuclear, no one does, and they are unwilling to bear the burdens of either having a Master Restationing Plan or conventional capability that would serve to deter a first resort to that nuclear capability.

So, we keep talking about it, but we are not making a whole lot of progress in dealing with it, in my judgment.

Let the record show that the gentleman is nodding in agreement.

General **Wickham**. Most of the nations in NATO have met their 3-percent real rate of growth.

Senator **Cohen**. Senator Nunn had an amendment last year, and I commend him for the effort, to urge our allies to meet the 3 percent growth.

Senator **Nunn**. You played a major role in that.

Senator **Cohen**. He really did a commendable job in getting the attention we keep talking about, 3 percent and they weren't measuring up.

Finally, you take a brick or bat and you say you had better anti up or else. That is no way to deal with our allies as far as I am concerned, but it did get their attention.

The fact is that there is only one element. The truth of the matter is if we have to redeploy our forces in the Persian Gulf, they have to bear a heavier burden for the land forces.

You raise the issue that the United States is decoupling and moving away from the defense of Europe. We have to sit down and have serious talks about how we are going to make this conventional deterrent meaningful and real.

General **Wickham**. There is an interesting sideline there. We will provide a more thorough answer in the record.

[The information follows:]

DEFENSE OF EUROPE

The United States is not moving away from the defense of Europe. The defense of Europe remains second to the defense of the United States in our defense policy priorities. However, we have told our allies that the United States has other global responsibilities which we cannot ignore and that we expect our allies to shoulder a greater defense burden. In fact, in 1980 we told NATO that the United States was developing contingency plans for the defense of U.S. and NATO interests in SWA. We urged NATO to undertake a study assessing the impact on NATO of a possible deployment of U.S. forces to SWA and to develop compensating measures offsetting resulting gaps in NATO's defense. Last year the NATO Military Committee approved that study. It is a good study which calls for a series of measures from nations to compensate for a possible U.S. contingency outside of the NATO area. These measures have been worked into the NATO Force Planning System as Force Goals. Therefore, by urging our allies to compensate for U.S. global contingencies, we may have achieved additional burden sharing measures which may further improve conventional deterrence in Europe.

To get at your point, the Germans, you know, with the Patriot arrangement we have worked out with them are now going to man 12 of our fire units for a period of 10 years and pay for them themselves. This indicates there is willingness to move in the direction of NATO allies undertaking functional responsibilities across the board such as the heavy forces or all air defenses which would free U.S. forces for capabilities that might be more advantageous for us to provide. I think there is truly opportunity for more effort in the direction you are suggesting.

Senator **Cohen**. Thank you.

Chairman **Goldwater**. Senator Quayle.

PROCUREMENT

Senator **Quayle**. Thank you, Mr. Chairman.

I should like to move to a less exciting and stimulating subject and that is the area of procurement. It is not as fascinating to talk about as perhaps military doctrine and what we should be doing in NATO, but I think one of great importance, particularly as we look to this fiscal crunch that we are in.

David Stockman is now before the Budget Committee, where I will be going in a few moments, to talk about how we can hold down spending across the board and one of the areas I think he will touch on, I am told, is perhaps getting more efficiency in the area of procurement.

Mr. Secretary, Secretary Taft recently issued a memorandum which talked about the overspecification, the gold-plating of certain weapons. I believe he has asked each one of the services to set forth streamlining initiatives and to identify four weapon systems that you are going to go in and closely examine to see whether we have overdesigned the item, like the so-called classic refrigerator or the coffeemaker that had more resistance than the airplane in which it was being flown.

Are you proceeding along these lines and if so, what four systems are you going to put on the auction block to take a close look at to see if it has been overdesigned or goldplated?

Secretary **Marsh**. I am not in a position to tell you what those four systems will be. However, we will look at all the systems in the Army to determine whether or not there is overspecification. I can think of one right now that I know has suffered from that problem. A lot of the times the over specification occurs because you are working the state of the art. You are seeking to produce a weapon system that will take advantage of any new technologies that will come onstream as it is being produced. Consequently, the result is very frequently you slow down the production of the system, you get an increase in cost and you don't really get the technology that you delayed production trying to get. A lot of that is miniaturization specification. Perhaps you try to do too much with the system and overload it with, very frequently, electronic capability. I will say to you that in the general area we are finding, it is in that particular field where we are having problems.

Senator **Quayle**. Will you be identifying for us specific weapon systems that you will be examining to see whether the design requirements are overspecified?

Secretary **Marsh**. I will say to you that we will probably look much further than the four systems. I am certain that we will hone in on a couple systems. I can think of one that is a very likely candidate. That is the remotely piloted vehicle which is an area where there has been problems in holding to specifications or seeking to expect too much from the system. We will thoroughly review all these programs.

Senator **Quayle**. The intent of the memorandum, is, and I think it is fairly specific that we want to look at these in a lot of detail.

I can only tell you from the Procurement Subcommittee aspect once you have identified those four, if you want to put 20, we will be glad to look at 20 with you. This is an area of great interest to me personally and to the Congress as well.

You have identified the overall problem, but the real challenge is to zero in on these specific items and identify what went wrong and how overspecification crept into this program and to learn from those lessons. I hope you will make identification fairly soon and be able to share with us those which you are going to examine.

Secretary **Marsh**. We will keep the committee fully informed on that and seek your help and consideration.

CAREER PATHS FOR PROCUREMENT PERSONNEL

Senator **Quayle**. General Wickham, I understand you talked about the career paths for procurement personnel in your opening statement or in response to questions. You stated that you are now giving guidance to promotional boards for program managers, to get them elevated to the rank of general officer so that they can see a clear path.

I am interested in more of a long-term approach. I think what you are doing there is fine, but when you get somebody that is a program manager, he has been in for a while.

I am wondering what kind of approach and strategy we should be developing for someone who early on enlists in the U.S. Army and they say if I want to get in the area of procurement, I can see from day one my way to the top, and I want to start out. I like the Army and I want to be useful, but I think I can be most useful in the recruitment area, we ought to go out and recruit more, maybe West Point would be willing to teach more.

Could you share with us some long-term strategy of how these people are going to get to the top and what kind of mix do we really need with hands-on operations versus those in the procurement area?

There has been a tendency in the past to have 50-50 split, 3 years in the procurement and 3 years out of the procurement. I tend to disagree with that. I think you have to have some hands-on experience, but I think that can be marginal, can be minimal.

I think if these people from day one can see their way to the top, not when they become program managers, but from day one, that there is a career path.

Could you tell us how we can get those people more excited to stay in the system?

General **Wickham**. Amen, sir.

We have just finished a year long study on the Officer Personnel Management System [OPMS] structure, the system that manages the programs for acquisition and career development. Headed by a lieutenant general, the purpose of this study was to see whether we can improve the upward mobility of people in certain specialties. We have changed the opportunities, we have changed the career paths for officers and now it is a matter of managing those career paths. Heretofore, for example, for an officer to be an aviator he also had to be an infantryman or artilleryman. Now we have one branch for aviation. If an individual wants to specialize in Army aviation, he can spend his whole career in that. If an individual wants to specialize in procurement, he can stay in that even though he may wear infantry brass. He will never go back to the infantry. He can stay in the procurement or in the logistics career path.

Senator QUAYLE. How early will he be making that decision and be able to see that career path?

That is my concern. I think what we have is maybe after 10 years or 12 years, once he gets into that procurement area, then he can say maybe I can see my way to the top right now.

I would like to see a strategy where that person gets in from day one, that they get into the Army, that they are going to stay in the procurement, that they want to become procurement officers.

I think the problem in the past has been there is no way they will make general officer if they stay in procurement. They have to be a battalion commander or artillery commander.

You mentioned an aviator had to have a certain requirement before he can get that position. That is my question.

General WICKHAM. Within 7 to 9 years an officer is going to have to make his choice of what he wants to do. I would maintain the 22-year-old or 21-year-old young officer really does not know enough about the Army to make that kind of informed decision. We provide the opprtunity for him in time. We have done something that is very innovative here.

Under Secretary Ambrose has asked that we go out and take a few officers right out of graduate school and put them into special functions where they will stay their whole career. There is a risk that we so specialize them that they lose touch with what the Army is about and they become interested in earning money outside the Army.

I think we have provided a good balance. I understand exactly where you are coming from and we are trying to move in that direction in a responsible way.

Senator QUAYLE. I realize there is this problem and the people don't have any feel for the operations of it. They are just going to stay there. I would imagine that with the basic training in some of the fields they are going to get into when they are going to be in the Army that we don't have to have this so-called philosophy of half and half, half operations and half in the area of procurement.

I also tend to think a 21- or 22-year-old person that has business aptitude or management aptitude could very well make that decision at 21 or 22. They can see that the Army can serve them, particularly if they can get to the top reasonably quickly, that it would be a good area for them to get into.

As we look at the whole procurement problem, we start talking about program management, how we are going to get these people to be the best, and our chairman has said the very best is what we want. If we are to give them the power and authority to go out and sit down with these contractors and move billion-dollar defense contracts, then you are going to have to have it.

We are going to have to start when they are 21 or 22 if we are going to get there.

RDX/HMX

I will ask one thing to furnish for the record. Could you give us an update on RDX-HMX, not only this year, but outyears, and any of the sites you are considering?

Secretary **Marsh**. That response may have to come from Defense.

Senator **Quayle**. If that is the situation, I will ask the indulgence of our Chair to be able to make a request to the Department of Defense.

Secretary **Marsh**. I will advise you where it is.

Senator **Quayle**. In the outyears and also the possible site location.

[The information follows:]

RDX/HMX

It is planned to continue the modernization of the Holston Army Ammunition Plant (AAP). Projects are planned through fiscal year 1992 and include the modernizing of Composition C-4 facilities, Composition A lines, HMX/RDX lines, Composition B lines, the liquid waste treatment and acetic anhydride plant.

Work commenced on the MUSALL Process Demonstration Plant in October 1984 at Longhorn AAP. The program is on schedule and the process demonstration will be completed in November 1985.

The design for the MUSALL pilot plant also at Longhorn AAP will begin in July 1985 with equipment installation beginning in February 1986. The pilot plant will be completed in April 1987. Design of the full scale plant will start in fiscal year 1987 with construction of the full scale facility beginning in fiscal year 1989.

An RDX plant will be constructed at Louisiana AAP commencing in fiscal year 1988. Congress appropriated design funds in fiscal year 1984 and 1985. It is planned to use the Louisiana AAP as the lead plant in the design efforts for RDX facilities at Joliet, Alabama, Indiana and Iowa AAP. However, the Army must submit a cost effectiveness study before any site specific work can be undertaken.

Thank you, Mr. Chairman.

Chairman **Goldwater**. I am glad you mentioned the Defense Acquisition Policy Subcommittee, which you chair and which is doing so very well in this general area. Both the Army and the Air Force have instituted basic, good training programs, not that that is going to be the end result, but they have at least started. They are building a nucleus from which I think they can get up to a competitive basis with the Navy, which has been in this business for a long time.

I think the Navy, ever since they started at Annapolis, would look to the midshipman and say we will give him 5 years at sea and then he will sit at the management desk, and their competitive program has worked out very well.

I feel definitely it will work out fine in the Army and in the Air Force.

Senator Bingaman.

DIVAD

Senator **Bingaman**. Thank you, Mr. Chairman.

Gentlemen, we have spent a lot of time in Congress on the Divad issue and I know you have in the Army as well. You indicated you have one more set of tests coming out and if those tests are not successful, the weapon will not be bought and the program will be canceled presumably.

Could you elaborate more on that?

General **Wickham**. What we tried to do, with the will and intent of the Congress, was to shorten the acquisition cycle by taking existing radar, F-16 radar, 40-millimeter cannons in production and an M48A5 tank chassis and put them together, work out the interfaces and software for the computer. We would then have for ourselves an air defense system consistent with the needs of the armored forces in Europe. We planned to buy 618 of these. We have already committed funds for about 146 of them from the manufacturer. There is no production authorized for 1985 because we want to test more. We want to be sure that all the software problems are worked out, and that in fact the system does perform up to the specifications that we have asked of it. That test is underway now. It should be done by the end of May so that the Secretary of Defense can make a final determination that either we end it at the 146 that we have already obligated funds for or we exercise option 3 which would carry us out to the final conclusion. If we don't exercise option 3, if the system does not function according to specifications, we are in trouble. We have hardly got a system that is needed in Europe. We are going to have to go out in the marketplace and look to existing systems that will not be as capable to fill the gap.

That is where it stands. We are not going to buy a system that won't work. We are down there to test it to see whether it will or will not work. We are using soldiers, not white-suited people from the manufacturer.

Senator **Bingaman**. Thank you.

FORT DRUM

Let me ask about Fort Drum, NY.

Our chairman and others have made the point that we may have too many bases. Yet I gather we are about to open up another one.

Why is that? Why is it not possible to use an existing base to accomplish what needs to be done at Fort Drum?

Secretary **Marsh**. Senator, Fort Drum is an existing base. There are active forces there, not large. It is used principally for the training of Army National Guard and Army Reserve.

The decision to create a 10th Mountain Division which would be the 17th active division, the decision was made to put it at Fort Drum because, one, it offers very fine training areas.

You are dealing with a facility there that has in excess of 100,000 acres. Its strategic location where it is located in the United States will assist in its deployment. It is an asset that is available for the services and we felt it is the best utilization for the new division.

STRATEGIC DEFENSE INITIATIVE [SDI]

Senator **Bingaman**. Let me ask about the SDI Program. Yesterday in Secretary Weinberger's posture statement, there was a statement that I may have read too much into, but it said on page 55 that there is reason to believe it will be at least as easy to destroy lesser range missiles as to destroy ICBM's.

I wondered if this indicates that perhaps the focus of our SDI Program would be moving more toward antitactical ballistic missile systems?

Do either of you want to comment on that?

General **Wickham**. I believe he refers to the antitactical missile capacity. We can provide a classified answer for the record.

[The information follows:]

SDI-ATM RELATIONSHIP

The SDI sensor technology may provide spin off technology or capability that can be used in ATM efforts. For example, it may provide methods that would provide cueing of launcher location, missile trajectory, and predicated impact point(s). Timely data such as this would, of course, be beneficial to all aspects of the ATM program. This action does not however, indicate a shift in SDI emphasis but a realization in the utility of shared technology.

In an unclassified way, the Army is pursuing research and development work. There is money in the 1986 budget to develop the capability for the Patriot system and perhaps the Hawk to defend itself against a missile. That kind of capability to the extent we can develop the technology may have wider applications than just defending itself against the ballistic missile coming in.

The Ballistic Missile Command of the Army, quite aside from the antitactical missile business, is involved substantially with the SDI initiative, as you may know. About $1.3 billion in the 1986 Defense budget has been allocated to the Army for research and development, extensive research and development in various envelopes, both exoatmospheric and endoatmospheric defense.

We also have within the Army budget $161 million for running of the Kwajalein Missile Range. That is separate from the SDI.

Senator **Bingaman**. What percent increase is that $1.3 billion over this year?

General **Wickham**. I will have to put that in the record, sir. It is substantial.

[The information follows:]

KWAJALEIN MISSILE RANGE

The $1.3 billion Ballistic Missile Defense budget represents an increase of 120 percent over fiscal year 1985. Kwajalein Missile Range is funded in a separate budget line in the amount of $161.2 million for fiscal year 1986, that figure is not included in the $1.3 billion.

Senator **Bingaman**. You are confident you can use all that additional money well?

General **Wickham**. It is all in the Defense area, the Secretary reminds me. The Defense area has kept all of the SDI money and they are apportioning out parts of it to the services. The $1.3 billion is that portion that comes to the Army. It is at least a 50-percent increase over last year. Yes, we believe we can.

As you may know, Senator, from media reports last spring and summer, we have been conducting some experiments in the Pacific missile range called the Homing Overlay Experiment where we intercept an incoming warhead and destroy it with nonnuclear capability outside the atmosphere. That illustrates that the technology is well advanced. We have a substantial commitment with a commercial capability as well as in-house capability for further research and development. We believe that that funding level of $1.3 billion can be spent profitably and effectively.

Senator **Bingaman**. I was given a chart called SDI Program funds. It says Army SDI total in 1985 is $589.7 million and in 1986 is $1,559.65 million.

General **Wickham**. I think we are not including the Kwajalein Missile Range under the 1.3.

Senator **Bingaman**. They would not include it in 1985; they would include it in 1986?

General **Wickham**. I don't know those numbers.

Senator **Bingaman**. $589 million to $1.559 billion, that is not quite a 200-percent increase, but nearly.

General **Wickham**. My figures would be $1.3 billion in 1986 for SDI. The Kwajalein Missile Range is not included in that. That may drive it down. So, we have doubled it.

Senator **Bingaman**. It does seem like a pretty substantial increase to absorb in 1 year, is the point.

Let me move on to this export control issue.

I read an article the other day about a large number of helicopters being delivered to North Korea. It was in yesterday's paper, I believe.

Are you familiar with the incident and could you explain that nature of the problem that needs to be fixed in order to prevent that from occurring?

General **Wickham**. You are referring to the MD-500 helicopter which is produced in South Korea under contract arrangement and, of course, produced in the United States.

I cannot give you an audit trail as to how those arrived in North Korea save to speculate that some of them may come from arms sales around the world. Those weapons are sold to other countries and then they are sold and resold so they could arrive in North Korea that way. Let us do an audit trail on that and supply an answer for the record.

[The information follows:]

This entire matter is now under active investigation by the Department of Commerce, and is classified. It would be inappropriate for the Department of the Army to comment on this issue.

We do have some data, and are willing to meet with Senator Bingaman to share whatever classified information is currently available.

Senator **Bingaman**. Thank you.

Chairman **Goldwater**. Senator Gramm.

RETENTION

Senator **Gramm**. I have just one brief question.

In looking over the data that General Vessey gave us yesterday, obviously tremendous progress has been made in the quality of recruits, which has risen. We have acquired and are maintaining superior weapons to what we had 4 years ago.

I see only one troubling figure and I would like to ask both of you to respond to that figure and that is the figure on retention in the Army. Looking at the chart, our retention has declined by what would be, if you did any kind of statistical analysis, a significant amount. That is a decline that is not reflected in the same degree in any of the other branches of the service.

Is this a problem? Is it a statistical aberration?

If it is a problem, what can be done about it; what can we do about it?

Secretary MARSH. Senator, the retention of the first-term enlistee is one of continued concern for us. We know statistically of 100 enlistees, about 24 will reenlist. Roughly 30 or 31 who enlist are going to end their service before their tour of enlistment. Either they are discharged from basic training or they are going to be part of a group that will depart prior to reenlistment. We know there will only be about 24 of that original 100 who will reenlist.

I would say to you that in the COHORT [Cohesion, Operational, Readiness and Training] Program whereby we enlist a soldier into a unit, he stays in that unit, trains with that unit, is constantly with it from basic training for the first 3-year enlistment, the statistics we are beginning to get back now is that retention in the COHORT unit is significantly higher than in the non-COHORT group of youngsters who come up for reenlistment.

I would say also that there are many young people who are coming into the Army who are seeking college benefits. For the 3 years or 4 years that we have them they make outstanding soldiers. I will say to you that many of the Rangers who participated in the assault in Grenada, that parachute jump in Grenada, many of those were college-bound youngsters. They are coming in to earn college funds in the Army and we move them through the Army in 3 years and back into society. We recognize that we can't have 25-, 27-, 28-year-old PFC—private first class—combat infantrymen and we are going to have to have some turnover anyway.

I will say to you one of the areas where we have concentrated in the last year or year and a half is that we seem to lose a constant figure of 10 percent in basic training. That 10 percent is constant, notwithstanding the fact that the quality of the enlistees is significantly higher. It still is a constant 10 percent. We are focusing on that to try to drive that figure down. It does not make sense if you have better recruits and enlistees that you should still have a fixed 10 percent attrition in the basic and advanced individual training. I think we have made some progress.

General Wickham may want to speak to it, himself.

General WICKHAM. He has said pretty much all of it.

If you take a look at the 100 that come in, at the end of their first enlistment, 3 years, we keep about 24. That is about what we want. That is a steady state of quality and vigor in the force.

I think we can do a better job, however, in terms of the people who go through our basic training and the attrition rate, as the Secretary indicated. We turn people out of the Army if they can't fire a weapon. They go through many times, over, and over, and over again shooting to see if they can't qualify. If they don't we turn them out. Well, the Marines don't do that. So, we are going to take a look at how they do it to see if we can't keep a few good people that we might otherwise turn out. We are working on the issue that you raise.

Senator GRAMM. Had our colleague from Georgia not left, I would ask you to outline how the bases in Texas are the very heart of the Army. Since he is not here to hear it, there is no sense doing that. [Laughter.]

Thank you, Mr. Chairman.

Chairman GOLDWATER. Senator Wilson.

HOUSING

Senator WILSON. Thank you, Mr. Chairman.

General Wickham, you and I have discussed the concern that we share about adequate housing for Army personnel.

I should like to know, first, what is the budget item in the Army's budget for military housing?

General WICKHAM. We have about $1.6 billion in the 1986 budget dealing with housing. We are talking about 3,000 units in this 1986 budget. Now, you balance that up against a total shortfall of about 25,000 housing units that we need in the Army. So, we are inching up in terms of acquiring adequate housing on post.

As you know, there have been substantial legislative initiatives made in past years, the section 801 where we build to lease, section 802 where we can provide rental guarantee housing. All of that is very helpful to us in providing adequate housing for our soldiers.

The rental allowances that are given to soldiers living off post to make them competitive with private sector bidders also are very helpful. But we do have serious pockets of problems—you and I talked about that—in high cost areas. We have to work harder at solving those problems.

Senator WILSON. Do all your commands where you are facing a serious housing shortfall have someone who is a specialist in working with the private sector and with local government in trying to devise a solution that may involve the use, not only of land owned within the boundaries of the base, but also immediately adjacent to it?

General WICKHAM. We don't specifically have someone designated that becomes an expert in that area, but every installation has an engineering officer who is responsible for managing housing on the post and acquiring knowledge of housing outside. We have a rental referral officer at every installation who interfaces with the external agencies to find out about rentals and to refer people to them.

Something that the Secretary and I have started here as an initiative, short-term initiative, is to increase the number of trailer pads that are available on our installations because the mobile home construction opportunity in this country, I think, is quite good. By building a number of pads, we think we can provide an opportunity for soldiers to buy a mobile home, and move it from one post to the other. Or we can go to a third party to have them provide mobile homes on post where we can oversee the environmental conditions and the morale and welfare conditions rather than force them to exist off post. We are looking at 200 pads at Fort Ord. We are doing something at Fort Drum and other posts.

Senator WILSON. I commend that initiative. Let me suggest that it might be useful if in some of these most heavily impacted commands either an officer, or perhaps a better solution is to get a knowledgeable civilian, a realtor, to become the person who works with the private sector and with local government.

What I had in mind is the experience that I have had personally as a mayor and also my observation of other situations where the private sector has demonstrated willingness, if they could be granted certain concessions by local government, to make efforts that were very responsive to the housing needs of the particular base.

There is no single solution, but I think what is required is a knowledgeable, imaginative packager of real estate deals to work with local governments and with the private developers.

I think more and more we are going to find that we need housing, that we are never able to budget quite as much as we would like to for it. It may be that there are other solutions beyond the traditional solutions that are available.

You mentioned some of the legislative initiatives have helped. If there are any others that you think are required, I would be particularly interested in working with you to develop those.

Let me make this offer to you, because California, with respect to almost all the services and certainly the Army, has the problem of a very high real estate market, one that tends to price out those at the bottom of the enlisted spectrum.

I would suggest that there is available in California, in the trade associations that have to do with home building and in State government, an opportunity to work to explore some of these possibilities. I will be happy to undertake that.

If you wish to designate someone as liaison to work with me, I will be happy to receive that name and we will proceed.

General WICKHAM. Thank you, sir.

AIRLIFT

Senator WILSON. General Wickham, last year you told the committee that airlift was the Army's greatest shortfall.

Is this still the case?

General WICKHAM. Yes, sir. Despite the great efforts of the Air Force to add additional airlift, the C-17, the C-5 and CRAF capabilities, we still wind up at the end of the decade with a shortfall of something in excess of 15 million ton-miles per day—that is an unclassified figure—against our worldwide requirement. That still is a long pole in the tent of our ability to apply forces. That is one reason we have gone toward lighter forces so that we can deal with that shortage.

There is something I neglected to mention and I guess I should have. Light forces are only one dimension of lightness. Lightness is a state of mind. We need to look in the Army, and I speak for the Army only, at lightening up our equipment. One-third of the weight of our ammunition is just wood, the way we have been doing it since the Civil War. Now we are packing it with plastics to capitalize on the opportunity to save money. We will save packaging weight by at least 20 percent.

We believe our medium artillery piece, which weighs 17,000 pounds, can be built with composite material to get it down to under 10,000 pounds. That will save us money, save us strategic deployment and think of the tactical ability that will be created.

There is plenty of opportunity for lightening our forces and the equipment that goes with them.

I neglected to mention the C-17 that the Air Force is acquiring. That is not only intratheater capability, it is intertheater capability which enhances our tactical mobility as well as strategic mobility.

Senator **Wilson**. Do I infer that the Army still strongly concurs with the Airlift Master Plan?

General **Wickham**. Yes, sir. We worked very closely with the Air Force in the design of the C-17 which will move all of our cargo.

Senator **Wilson**. My time is up. Thank you, General.

Let me just make one comment, Mr. Chairman.

I congratulate you, Secretary Marsh, on the decision that you made at the beginning of your tenure when you had a choice between modernization and expanding end strength.

I think that the Army that has developed under your tenure is an Army of very high quality and one which you can be proud of and one in which I have great confidence.

Secretary **Marsh**. Thank you, Senator.

Chairman **Goldwater**. Senator Levin.

PAY COMPARABILITY

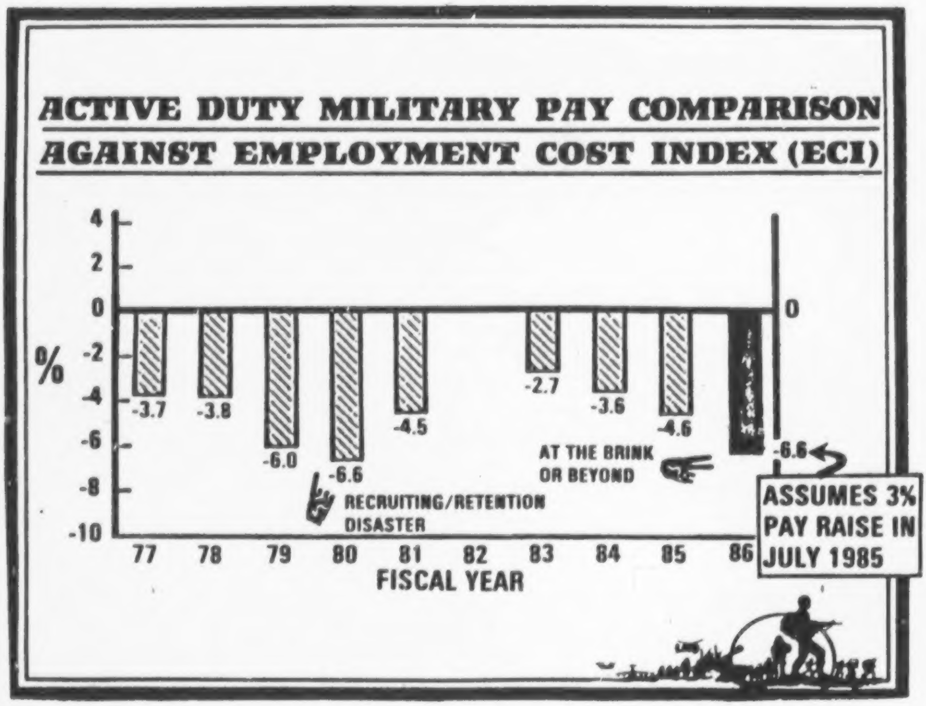
Senator **Levin**. Thank you, Mr. Chairman.

First of all, I wonder, Mr. Secretary and General Wickham, whether or not you would agree that pay comparability is vital to the retention of experienced noncommissioned officers who now can find better pay for their skills as civilians?

Secretary **Marsh**. Senator, there is no question but that the goal of pay comparability is very vital to our recruiting efforts.

I would say to you that it was the leadership of this committee in recent years in addressing the imbalances in pay that has contributed very significantly to the progress that we have made.

We think that even with the pay increase, we will still be cut of comparability with the 3 percent increase on July 1 by roughly 6.6 percent, using the scale of comparability to the civilian community.



General WICKHAM. This shows you the percent on the left and the fiscal year along the bottom, active duty military pay comparison in relation to the Employment Cost Index [ECI]. This shows we have dropped off in pay comparability. We were 3.7 percent below comparability in this year. 1980 was a disaster year in terms of recruiting. We had a pay raise in 1982. Now we are falling behind.

Even with the 3 percent pay raise in July that is in this budget, we are still 6.6 percent behind in terms of comparability. If we do not get that pay raise in July 1985, we will be 9.6 percent behind. That is the issue you are raising. People will vote with their feet with this kind of situation facing them.

Senator LEVIN. Looking at the DOD figure which is 9.6——

General WICKHAM. We are assuming the increase.

Senator LEVIN. They assume it, too.

General WICKHAM. No. We are saying that the numbers are consistent. We are saying the same thing.

Senator LEVIN. You are saying that the 9.6 figure which has been published by the DOD does not assume that 3-percent pay raise?

General WICKHAM. That is right.

Senator LEVIN. That is different from the information I have.

In any event, you are showing that pay comparability is getting worse?

General WICKHAM. Right.

[Additional information follows:]

MILITARY PAY

The cumulative military pay lag is calculated based upon the relative growth in military pay and civilian earnings from a specified base year. The base year is chosen as a year in which the value of relative pay is "known" (e.g., the Army has assumed that military and civilian pay were comparable on Oct. 1, 1982). The military pay lag in future years is then computed as the ratio of the cumulative growth in military and civilian pay.

Since fiscal year 1984, the services have measured civilian pay growth by the rise in the Employment Cost Index (ECI) as published by the Bureau of Labor Statistics. This index is being used because it is based on an occupational mix that more closely approximates those found in the military. Furthermore, the Professional Administrative Technical Clerical (PATC) index is no longer computed by the Bureau of Labor Statistics.

The Army and OSD differed in their estimates of the pay lag because of the following two differences in the manner in which the above methodology is implemented:

a. OSD has chosen fiscal year 1972 as its base year (i.e., full comparability as Oct. 1, 1971). This implies a military pay lag of .2% in fiscal year 1982 as opposed to the Army's assumption of full comparability at the beginning of that fiscal year.

b. OSD calculates the civilian pay growth using the preceding year's March to March change in the ECI (e.g., as shown in Figure 1, the ECI growth pertinent to fiscal year 1985 would be the rise from March 83 to March 84).

The effect of this divergence in computational conventions is to create a difference of 2.3% in the reported military pay gap for fiscal year 1985 (6.9% (OSD) vs 4.6% (Army)) which expands to 3% for fiscal year 1986 (9.6% (OSD) vs 6.6% (Army)). Thus, the 3% difference in the reported 1986 numbers is due to methodological differences and not to a failure by OSD to include the proposed July 1985 pay raise in their calculations.

The Army and OSD are in the process of resolving this issue.

Senator **Levin**. According to the statutory scale which we use on comparability, according to my figures, supplied by the Department of Defense, the figure now is 13.4 percent which puts us further behind the comparability than any time in the last 11 years.

Do you know whether the gap in comparability as measured under the statutory requirements does in fact reach 13.4 percent?

Secretary **Marsh**. I am not sure that it does. I may be mistaken of that. I will be glad to furnish that for the record.

[The information follows:]

PAY COMPARABILITY

The degree that military pay lags behind comparability with that of the private sector depends upon which of two Bureau of Labor Statistics indices is used to measure private sector wage growth—the Professional, Administrative, Technical and Clerical Index (PATC) or Employment Cost Index (ECI). Since the 1981 pay adjustment that restored rough pay comparability, military pay growth has lagged behind private sector wage growth on both.

The PATC index is stated in a 1967 statute as the index to which annual military and Federal civilian pay adjustments will be matched. Proposed DOD legislation (Army fully supports) would delink military pay from the PATC and create a linkage with the ECI—an index much more representative of the military skill mix. As reported by OSD, military pay lags to PATC by 13.4% and to ECI by 9.6% (after the proposed 3% increase July 1, 1985). The Army has calculated that after the proposed 3% increase July 1, 1985 military pay lags ECI by 6.6%. OSD and Army are working to correct the differences in the computations.

Senator **Levin**. Assuming the Defense Department's figures are correct, Congress has said we want you to measure comparability by this standard.

According to the professional, administrative, and technical clerical index, the deficit is 13.4 percent which would make it the worst that we have had in 11 years. I gather you would agree this is the wrong direction for us to be going.

General **Wickham**. All you are doing is gilding that lily.

Senator **Levin**. Would you agree that is the wrong direction?

General **Wickham**. Yes, sir.

Senator **Levin**. By the way, I am delighted that you made reference to some of the leadership on this committee. I am particularly looking at Senator Warner, Senator Nunn and others on this committee who have been very, very active in this area. I would share your commendation.

Chairman **Goldwater**. I wish you would supply the index.

Senator **Levin**. I will submit for the record both the measure which the law requires us to use, the index that I have mentioned which shows us 13.4 percent behind comparability, which is the worst in 11 years, and I will also give the basis for those other statistics to see if there is some difference.

[The information follows:]

MAP#2

199A

COMPARISON OF MILITARY PAY, PATC, ECI, CPI, AND GS INCREASES

FY (PAY RAISE EFF DATE)	Military Pay Increase	Military Pay Cumulative	PATC Increase	PATC Cumulative	ECI (1) Increase	ECI (1) Cumulative	CPI (2) Increase	CPI (2) Cumulative	GS INCREASE	GS CUMULATIVE	Military Increase Relative to PATC	Military Increase Relative to ECI	Military Increase Relative to CPI	Military Increase Relative to GS
73 (Oct 1, 72)	6.00	6.00	5.80	5.80	5.80	5.80	2.50	2.50	5.10	5.10	0.2	0.2	3.3	0.8
74 (Oct 1, 73)	7.30	13.74	5.40	11.51	5.40	11.51	7.40	10.09	4.80	10.14	2.0	2.0	3.2	3.2
75 (Oct 1, 74)	5.50	19.99	6.40	18.65	6.40	18.65	12.00	23.30	5.50	16.20	1.1	1.1	-2.8	3.2
76 (Oct 1, 75)	5.00	25.99	9.00	29.33	9.00	29.33	7.80	32.91	5.00	22.01	-2.6	-2.6	-5.5	3.2
77 (Oct 1, 76)	4.83	32.08	7.00	38.38	7.00	38.38	5.50	40.22	4.83	27.91	-4.8	-4.8	-6.2	3.2
78 (Oct 1, 77)	7.05	41.39	6.90	47.93	6.80	47.79	6.60	49.48	7.05	36.92	-4.6	-4.5	-5.7	3.2
79 (Oct 1, 78)	5.50	49.17	7.90	59.62	7.50	58.88	8.30	61.88	5.50	44.45	-7.0	-6.5	-8.5	3.2
80 (Oct 1, 79)	7.02	59.64	7.80	72.07	7.80	71.27	12.10	81.47	7.00	54.57	-7.8	-7.3	-13.7	3.2
81 (Oct 1, 80)	11.70	78.32	9.10	87.72	9.10	86.85	12.70	104.52	9.10	68.63	-5.3	-4.8	-14.7	5.4
82 (Oct 1, 81)	14.30	103.82	9.70	105.93	9.30	104.23	11.00	127.02	4.80	76.73	-1.0	-0.2	-11.4	13.3
83 (Oct 1, 82)	4.00	111.97	9.50	125.50	8.10	120.77	5.00	138.37	4.00	83.79	-6.4	-4.2	-12.5	13.3
84 (Jan 1, 84)*	4.00	120.45	7.40	142.18	5.60	133.14	2.90	145.28	4.00	91.15	-9.9	-5.8	-11.3	13.3
85 (Jan 1, 85)*	4.00	129.26	4.70	153.57	5.10	145.03	4.20	155.58	4.00	98.79	-10.6	-6.9	-11.5	13.3

(1) The first full year of the ECI index was for the period March 1976 - March 1977. For this table, it is assumed that the increases in the ECI from 1972 to 1976 were identical to PATC increases.

(2) Measured from October to October.

* Assumes full year pay raise.
(Assumes full year pay raise to 1 Oct--beginning of fiscal year)

Senator **Levin**. In any event, we can agree that we are going in the wrong direction. I would list that as a shortfall and a growing shortfall.

Would you agree with that?

Secretary **Marsh**. As I said, Senator, we are concerned about the fact that we have been slipping behind.

STRATEGIC AIRLIFT

Senator **Levin**. You have also identified a shortfall for Senator Wilson here in airlift capacity and capability.

Your figure, General, I think was that by the end of the decade we will be 15 million ton-miles a day short.

General **Wickham**. Yes, sir.

Senator **Levin**. Can you tell us what percentage shortfall that is? What is the requirement?

General **Wickham**. The long-term objective is 66 million ton-miles per day and we will have about 50 by 1990.

Senator **Levin**. So, you figure there is about a 20-percent shortfall?

Chairman **Goldwater**. It has been 20 percent ever since World War II and there is no way of seeing an improvement.

Senator **Levin**. We seem to have a nagging 20-percent shortfall in airlift capability.

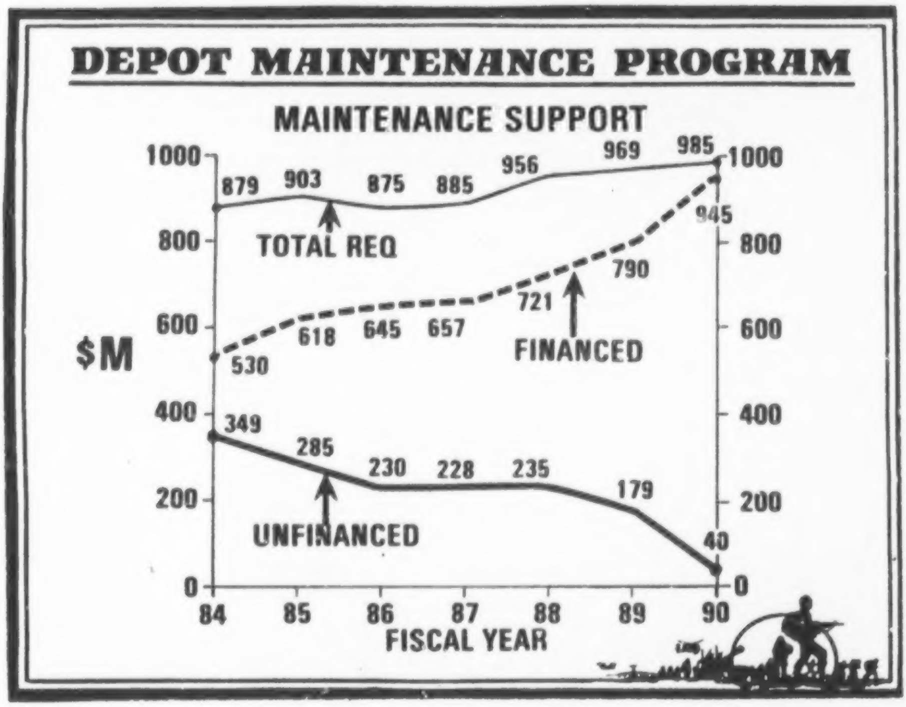
General **Wickham**. While the capability goes up, the requirement goes up. We have more forces than we have capability to deploy on time and the forces are generally heavier. We are trying to compensate for the heaviness by restructuring some light capability. Maybe the 20–25 percent shortfall will shrink.

DEPOT MAINTENANCE

Senator **Levin**. I am glad to hear that, even though I represent a great wood-producing State.

We have identified two of the shortfalls. One is a growing shortfall in pay comparability. Another one is a nagging shortfall in airlift.

We have a shortfall which is going to grow in depot maintenance. The backlog is low this year in depot maintenance. We can at least take some credit for the improvement because I, Senator Humphrey and others added money last year to reduce depot maintenance.



In any event, mainly because of congressional add on last year, we reduced the backlog in depot maintenance.

Is it true that the depot maintenance backlog is going to now start getting worse in 1987 and 1988?

Secretary MARSH. I think you will find it will come within the congressional mandate by 1987, if I am not mistaken. The bottom line is the unfinanced portion. You will notice that that is ramping down, fortunately. The financed portion is the dotted line. You will see that we are beginning to make significant progress in disposing of that; not as much as we want, but there is a closure.

Senator LEVIN. If I am correct, the maintenance support underfunding figures are 228 million in 1987, and 235 in 1988, it is coming down in 1986 and going up slightly in 1988.

Is that right?

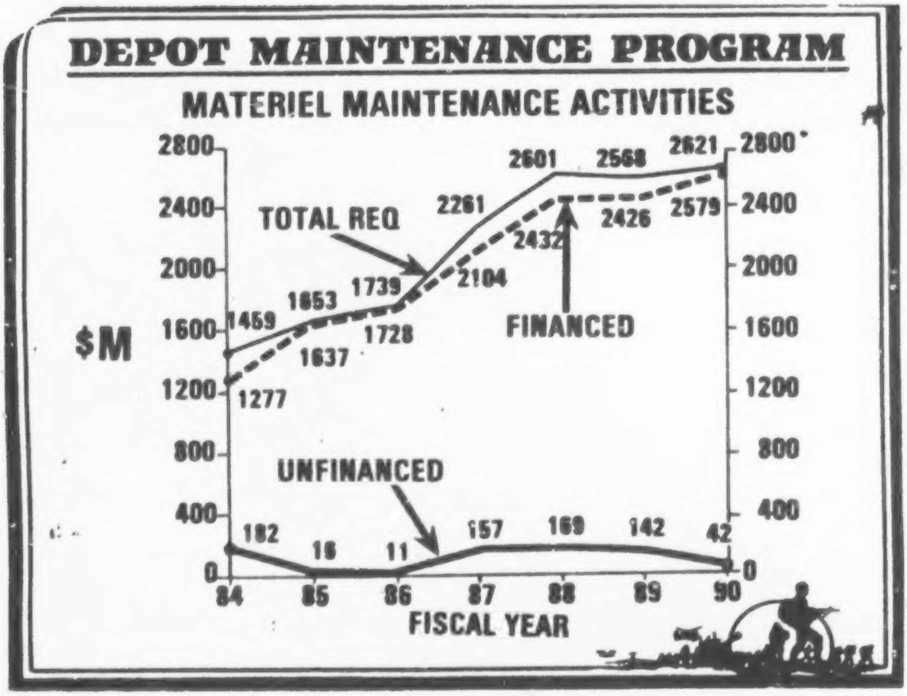
And is it projected to go down again?

Secretary MARSH. That is correct.

Senator LEVIN. So, we continue to have an unfinanced depot maintenance backlog which is a problem.

Is that fair? Do you worry about that?

Secretary MARSH. Yes, sir, we are worrying about it.



General WICKHAM. Maintenance support basically is your publications and that kind of thing. That is what the other one was. That is the hardcore maintenance support. That is billions of dollars now. We are almost at zero on unfinanced.

Senator LEVIN. That is, as I understand it, because there was an add on. For whatever reason it is, isn't the unfinanced depot maintenance backlog going up again in 1987 and 1988?

General WICKHAM. A little bit, yes, sir.

Senator LEVIN. Are you worried about it?

Secretary MARSH. The financed line almost tracks the requirement line.

Senator LEVIN. Should we worry or not worry about it?

Secretary MARSH. Anytime it does not close, we are concerned about it. We are pleased that we are making the progress that we have made because of the funding you have given. If you continue to do that, we think we can close it.

Senator LEVIN. My time is up.

Basically the question is: Is that unfinanced backlog something we ought to worry about or not?

General WICKHAM. It is 5 percent of the gross requirement which is manageable. In building a budget, we try to balance a lot of things. This is something that is a little unbalanced.

Senator LEVIN. This is manageable?

General WICKHAM. Yes, sir.

Senator LEVIN. Thank you.

Chairman GOLDWATER. Senator Denton.

Senator **Denton**. Mr. Chairman and gentlemen, I will make this brief and thank you, Senator Warner, and my other senior members for deferring since I was here earlier, and that is the custom.

I am sure it comes not as a great surprise to you, Mr. Secretary, and to you, General, that perhaps the main issue at hand today, this year, is that Congress is concerned with the deficit and the irresponsibility of Government spending.

We are going to achieve at least a trend toward a responsible balance between revenues and expenditures. Insofar as the Department of Defense and the U.S. Army are concerned, there is the issue of how much and whether to cut, whether to freeze the administration's proposed Defense budget.

Yesterday the Secretary of Defense answered a couple of questions in a certain way and I would like to hear the Army address the same two questions.

Keeping in mind that we in Congress are mandated to provide for the common defense and only to promote the general welfare, not to minimize the importance of the word "promote," but to provide common defense. Keeping in mind that President Reagan has succeeded in raising the level of appropriations resulting in improvements, in more hardware, better hardware, better readiness and morale, quality of life and all the other improvements which you have justifiably boasted about with respect to the Army today, when I asked the Secretary whether in spite of all those improvements, the relative threat over the past, say, 20 years has increased against the U.S. interests, he answered in the affirmative.

I specifically referred to a timeframe in which President John F. Kennedy was spending twice as much on Defense as he was on social programs and today when the opposite is true. Referring also to figures which the Secretary and the chairman referred to frequently; namely, if the rate of increase in Government spending were given 100, the increases due to social spending would be given an 89 and those to Defense 11.

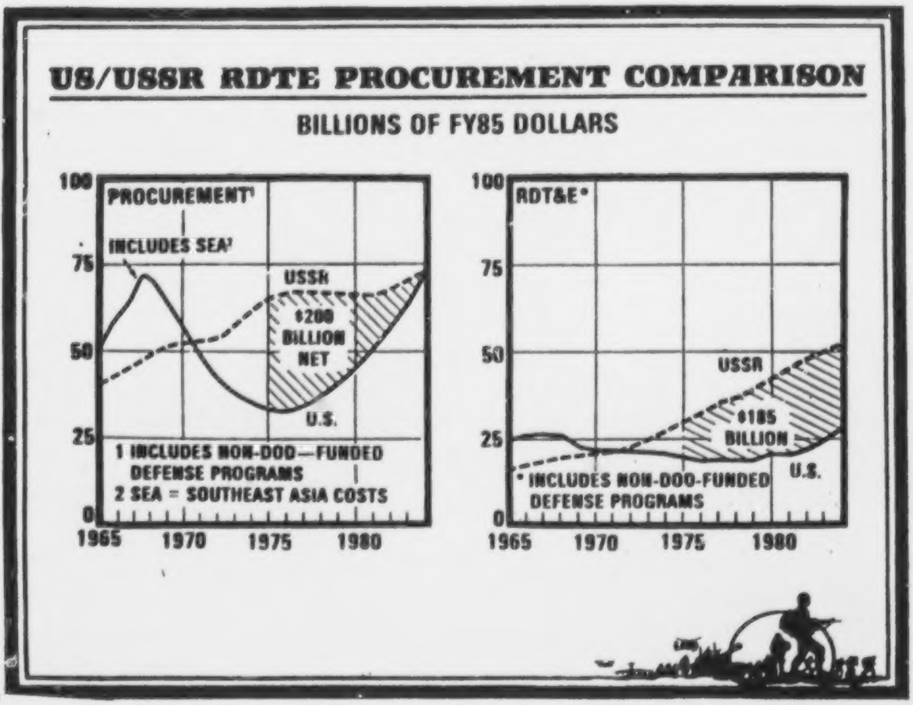
In view of that, the Congress in soberly assessing its budgetary motivations this year must make some very hard decisions.

SOVIET THREAT

First of all, from the point of view of the Army, do you agree that in spite of the improvements over these past several years relative to the time of, say, 20 years ago, the threats against the United States not only in terms of her territorial integrity, the lives of her population, her way of life, but the incremental interests around the United States which, taken in total, would constitute a vital interest, have those threats increased or decreased relatively?

Secretary **Marsh**. We feel, Senator, if you look at the threats that confront the U.S. Army today, that they have increased. Of course, we don't control those threats. Those threats are actually controlled by others.

If you look at the growth of the Soviet Army as to size, quantitative improvement, qualitative improvement, the modernization program of the Soviet Union, the introduction of greater technology into the force, the upgrading of their combat arms, the increase of their capabilities in communication, the emphasis they are placing on command and control—if you look at their overseas expansionism, when you look at Afghanistan, the introduction of the military equipment into Africa, into the Middle East, into our own hemisphere, I would have to say to you, Senator, that the threat has not diminished. No, on the contrary, it has increased.



General WICKHAM. I show you a slide which makes the case graphically, showing procurement of the Soviet Union, the best we can estimate, and what we are doing over time. The other chart shows R&D over time. Yes, we are getting better in terms of procurement relative to the Soviet Union, but we have a $200 billion gap over the years as they have procured and put investment into hardware. That word comes from what we find in Cuba and Nicaragua. In R&D we have a $185 billion gap in here even though the U.S. trend line is beginning to turn up. So, that kind of gap means that we are worse off.

Senator DENTON. A followup question.

You have concentrated on the Soviet Union.

Is it true or not that in terms of countries like Iran, Libya, Nicaragua, and other areas of the world, that the number of geographic locations in which the Army must face threats and complex problems of logistics has increased over those years?

Secretary MARSH. Yes, sir, that point is correct, sir.

With the buildup of arms in Libya, as an example, and the volatility of the war between Iran and Iraq, the destabilization of the Persian Gulf is a possibility. That is also true in Africa and Central America.

SECURITY AND DOMESTIC ECONOMY

Senator **Denton**. The Secretary also agreed when I asked him if the domestic economy of the United States had not suffered dramatically and I mentioned hundreds of billions of dollars a year in the cases of failed security policy around the world over the past perhaps 15 or 17 years. I refer to the loss of the cause in Vietnam in which there were not only the loss of human life, there was not only geographic loss in terms of what the free world had been, but there were losses in terms of access to the natural resources known to exist, some not known to exist.

It is my thesis that the Saudis would not have tripled the price of oil if they had not seen in 1973 signs that the United States was losing sight of its interests and losing the will to pursue them. I don't think they would have tripled the price in 1963, for example, and I have nothing against the Saudis at all.

I think they, among others in the world, perceived that the United States was perhaps losing its will. But that the framework in which we have chosen to debate the budget issue, like cutting the Defense appropriations in the same manner that we might cut welfare appropriations, shows the folly of that perception.

Have you seen in your international affairs outlook, beyond the Army's own narrow outlook, evidence that the domestic economy of the United States, which includes the capacity to help the poor, and so on, has suffered drastically as a result of failure of security policy which we do not blame on the military?

Secretary **Marsh**. You would have to conclude there have been certain areas that have impacted on the domestic scene in our economy. The oil embargo of 1971, which very drastically changed the relationship between the price of oil and other commodities, not only affected the industrial society, but it also had a very signigicant impact on the less developed countries of the world. In some instances it probably contributed to destabilization and insurgencies. I think that is the case in Latin America.

If you look at the American industrial capability, you would have to say of the 40 minerals and metals that are critical to this industrial economy, that we are more than 50 percent dependent for 23 of them on countries beyond our own shores. Only Canada, in some instances, can supply some quantities of those. Consequently, our ability to move about the face of the Earth to acquire raw materials directly relates to our economic health and our economic health is related to a strong foreign policy, backed up by a strong defense policy.

Senator **Denton**. The effort of President Carter to dissuade Mr. Brezhnev from further carrying of Cuban troops to Angola has not favorably affected access to favorable trade on the Continent of Africa with disastrous consequences already to our trade in that domestic economy.

Thank you, Mr. Chairman.

Chairman **Goldwater**. Senator Warner.

Senator **Warner**. I extend my apologies for being late at this hearing, but it was unavoidable.

Mr. Chairman, I think the committee should take note of the fact that Secretary Marsh has finished one hitch of 4 years and since the "Whisper Sheet" shows no indication he is departing, we can assume he is going to stay on for a while. According to my recollection, the only Army Secretary in history to do that would be Stanley Resor in the late sixties or early seventies.

Secretary **Marsh**. That is correct. I believe Mr. Brucker stayed on for a time in the second term.

Chairman **Goldwater**. He is a Virginian.

Senator **Warner**. I was going to bring that up as a wrap-up.

Chairman **Goldwater**. He is a graduate of VMI.

Senator **Warner**. He went to Washington and Lee with me where he didn't distinguish himself at all. We were classmates.

Anyway, the old Navy Department blue-suiters used to have a saying that a service secretary is one who traveled overseas continuously and left after 2 years. You have failed on both counts. Of course, the Army would never say anything like that about their civilian boss.

I think you must agree you have been blessed by two distinguished chairmen of the Joint Chiefs of Staff.

Mr. Secretary, my colleague, Senator Levin, raised the issue of taking care of our people and indeed I was privileged to associate with Mr. Nunn, Mr. Levin and other Members who gave strong support and we did make progress.

I hope that as we address this budget situation that we do not lose any momentum in that area. I think the questions this morning by the membership indicate it is the sentiment of this committee to continue that progress.

COMMUNICATIONS

I would like first to turn to the question of communications. I am interested in following Army communications. I had some modest background in that area when I was in the service.

Where are you with respect to your tactical radios and the other tactical networks?

I know you are looking at the major system now, RITA that the French manufacture and offer.

Secretary **Marsh**. Senator, there is a very extensive threefold modernization program for communications in the Army.

The Army system, one we call the Mobile Subscriber Equipment System, will provide area communications for corps to division. Below division down to the tactical units, you have a new system called SINCGARS—Single Channel Ground and Air Radio System. They will be compatible systems. They will then interface with the defense system through the TRI-TAC—Joint Tactical Communications—system. The system called the Mobile Subscriber Equipment, for which we are seeking funding, will actually be a corps communication system. We will introduce that into the Army corps that is based in Texas. We will completely supply at one time two of the corps' divisions of regular Army forces. We are placing it in the corps here in the United States in order to monitor from a testing standpoint. We want to find out what bugs it has in order to correct them where we can get at them very easily.

The SINCGARS system will be a new tactical system that will dramatically increase the capabilities of communication with the tactical units from brigade to lower. It will have the capability of secure transmission also. It will be a revolutionary system for the soldier and for the units in the field.

Senator WARNER. Mr. Secretary, what about the interoperability with our own sister services? Would we have a Grenada situation if this Nation were faced with the misfortune of having a military operation like that tomorrow?

Secretary MARSH. It is my understanding that the mobile subscriber equipment communication system, particularly as it locks into TRI-TAC, if I am not mistaken, will have full interoperability and will overcome some of the problems that we have had in interservice communications in the tactical situation in the past.

General WICKHAM. That is correct.

Senator WARNER. That is a very short answer to a very important question.

General WICKHAM. Interoperability is woven into the requirement. With the tactical radio, FM frequency modulated radio, SINCGARS that the Secretary talked of, we can communicate with air.

For mobile subscriber equipment we are looking to the French system, the RITA system. The British have a system, PTARMIGAN. We are looking to that type of nondevelopmental initiative by taking something off the shelf and seeing if we can apply it to the Army. That will be a revolutionary method of communications for the Army.

Senator WARNER. I want to come back to simple basics, General. Do these new systems lend themselves to communications with the Navy and the Air Force?

General WICKHAM. That is what I meant by interoperability.

Senator WARNER. You said you can contact air. You used the word air. There is Army air and Air Force air.

General WICKHAM. Air Force and Navy.

Senator WARNER. I want to get the record very clear.

General WICKHAM. That is the basis of the TRI-TAC concept where we would have tri-service tactical systems so that we can communicate.

Senator WARNER. We are moving toward total interoperability among the military departments: is that right?

General WICKHAM. We are talking to AWACS [Airborne Warning and Control System], we are talking to E-2C's.

Senator WARNER. Above corps level?

General WICKHAM. Above corps. Now, the units that will be mobile on the battlefield can talk to the corps commander who can talk to an AWACS. They may not own the communications, but communication links will be available to them to talk through secure means to an AWACS.

Senator WARNER. You have interoperability at divisions? Is that what you mean by above corps?

General WICKHAM. Above corps would be at the theater Army level.

Senator WARNER. Theater Army level, total interoperability?

General WICKHAM. Yes, sir.

Senator WARNER. Now, in the corps he is dependent on the Theater Army circuits?

General WICKHAM. And down to the division the same way.

Senator WARNER. What about simple ship-to-shore in landing operations?

General WICKHAM. If you went in with a small force, say a division or a corps-type force, then that force would bring with it assets that would be able to communicate with ships and with aircraft of the Air Force.

Part of our Readiness Command, Redcom, involves a communications package that would go with deployed forces if we went to a bare-bone situation such as in Southwest Asia.

Senator WARNER. Turning to interoperability with our allies, particularly in the NATO arena, what is the status now and what do you hope to achieve here in a reasonable period of time?

General WICKHAM. When we go with, Congress willing, the mobile subscriber equipment concept in Europe, then we will have substantial interoperability with the French RITA system and the British PTARMIGAN system.

The Germans don't have anything similar to that, so we will have to use their existing network of radios.

Senator WARNER. Again, is that a theater Army level interoperability?

General WICKHAM. That will be down to brigade level, all the way down through the whole tactical structure. The SINCGARS radio the Secretary spoke of is a jamproof radio. It hops in frequency so that the enemy can't find the right frequency. We have an interoperability problem with our allies with that radio.

Senator WARNER. When you say you have a problem, are you working toward a solution?

General WICKHAM. Yes, we are working toward it. They do not have that kind of technology and apparently are not planning to acquire that kind of communications capability in the near term. What we have developed are interfaces so that we know that someone is trying to call us on one frequency and vice versa. We have to work little black boxes and procedures so that we can talk to each other.

Senator WARNER. What are we going to do with the West German forces?

General WICKHAM. We can communicate with them in all tactical communications. On the SINCGARS radio, for example, when a German radio unit is calling an American unit, the SINCGARS radio will indicate that there is a call coming in on a special frequency. Then the operator goes to that single frequency and then can talk to the German radio. When he wants to call the German he follows a similar procedure. Within the United States unit the radio is completely automatic, its frequency hops all the time and it is jamproof. Only 20 percent of German radios are jamproof.

Senator WARNER. My time is up.

Chairman GOLDWATER. Thank you.

General, I think partially in answer to the question put to you, one of the most encouraging things we are going through right now is the development of this communication ability.

As an old communicator, I think it is the most thrilling thing that is going on. I believe the Army, Air Force, Navy and Marines can help each other.

M1 TANK

General, I think we have about 2,400 of the M1 tanks produced?

General **WICKHAM**. That is about right, sir.

Chairman **GOLDWATER**. The engines have been performing very well. The question in my mind is that as our inventory grows toward the 8,000 mark, as long as we don't have any combat, a single-source engine might be all right.

I think we should develop a dual source for M1 engines. I have talked to the field about this and they are in agreement.

The engine's performance has been excellent thus far. I think you are running pretty close to 90 percent operability over in the theater now and that is something we never dreamed would happen. The Air Force's tactical aircraft are coming up to that mark, although they have a way to go.

I do intend in the Tactical Warfare Subcommittee to look into a second engine source. I don't know whether we can sell it to the House. It will have no effect at all on the production of the tank.

I think the tank is one of the finest weapons that we have ever produced. I don't say that to make my friend from Michigan happy.

Senator **LEVIN**. Even though I know it.

BINARY CHEMICAL PRODUCTION

Chairman **GOLDWATER**. There are some people who don't live in Michigan who may not be aware of that fact.

We have had a discussion about the binary chemical production. The Tactical Subcommittee will also recommend production in that area. Just how much or what, we don't know until you tell us.

Having been on the Intelligence Committee for 8 years, I have heard some of the most frightening information about the Soviets' ability in the whole chemical issue area to convince me that even though it is a very, very difficult subject to sell to the American people, I don't want to see our troops go into battle today almost completely unprepared.

I have had that suit on that you are supposed to wear against chemicals. Even if you don't run into chemicals, you will be pretty dead at the end of the day just carrying the thing around. I want you to know that we do have this in our plans.

CASELESS AMMUNITION

I am glad that you are going to the fiber boxes for ammunition. What is the lowest caliber you can use caseless ammunition? Does it go down to 30 caliber?

General **WICKHAM**. No, sir. The smallest caseless ammunition we are using will be the 120 gun ammunition we will put on the new M1A1 tank.

Chairman **GOLDWATER**. That should go to 30 or 40 on that? Have you tried it?

General **WICKHAM**. Let me get an answer for the record on where we stand with research and development.

[The information follows:]

CASELESS AMMUNITION

The Army initiated an R&D technology base (6.2) program for $350,000 in fiscal year 1985 for caseless cannon caliber ammunition (20mm thru 40mm).

Chairman **Goldwater**. I would like to know because this would be a very remarkable advance if we could eliminate the transportation weight of boxes and in some cases metal boxes.

The caseless ammunition that I have seen, the 120, performed beautifully.

General **Wickham**. With artillery, as you know from your experience as an infantry soldier, you need different charges for different ranges. So, a caseless structure for artillery is out of the question.

The Germans are developing a rifle which uses caseless bullets. We are working very closely with them because of the substantial weight savings and accuracy of that type of weapon.

I fired it in Germany.

Chairman **Goldwater**. What caliber is that?

General **Wickham**. It is smaller than the NATO cartridge. It is 4.93 millimeter, but high velocity.

ARMY/AIR FORCE INITIATIVES

Chairman **Goldwater**. You are together now with the Air Force on the initiative involving the helicopter?

General **Wickham**. Yes, sir.

Chairman **Goldwater**. That will be worked out all right?

General **Wickham**. Yes, sir. The Air Force will keep the HH-53 Sar Pave Low aircraft. The Army has in this budget funds to acquire 30 Blackhawk helicopters. Additional funds will be programmed to provide all-weather capability as we begin to develop a capability to assume the rotary wing special operations force mission. By the end of this decade we will take over that mission from the Air Force.

Chairman **Goldwater**. That will include all the Blackhawks?

General **Wickham**. Yes, sir.

DIVAD

Chairman **Goldwater**. You touched on the Divad. I am sorry Senator Dixon wasn't here because he had a rather poor experience yesterday. I would rather have him tell you that directly than have me repeat it, but I know that you are having problems with Doppler radar, which is not unusual.

Have you ever thought of substituting another type radar for that Doppler?

General **Wickham**. I don't know, sir. I can get an answer for the record on that.

[The information follows:]

DIVISION AIR DEFENSE GUN SYSTEM [DIVAD]

Divad Radars.—The F16 acquisition and track radars have been successfully integrated into the Divad. Radar performance during testing has been meeting system requirements. Some problems have been identified but they are correctable. There are no problems that would warrant a new radar system. Initial Production Tests ongoing at Fort Bliss, Aberdeen Proving Ground and Electronic Proving Ground will determine whether radar contractual specifications requirements are met.

Fort Bliss Demonstration.—On 1 Feb 85, a Sgt York demonstration was held at Fort Bliss for Senator Dixon. The Sgt York radar performed properly during the demonstration. The problem in keeping on target experienced by the Senator was not due to poor radar performance but rather the difficulty the Senator experienced in coordinating his hand movement on the hand grips. This is not surprising since the senator had received only a few minutes of instruction before operating the system. The problem is similar to that experienced by a person playing an arcade video game. At first, one is all over the video screen; with practice, one becomes quite adept at coordination. While the skill required is not complex, a soldier is not expected to master the Sgt York System without training. The Army has developed a comprehensive operator training program of 18 weeks in duration to train the soldier to engage successfully and to effectively operate all parts of the system.

Chairman **Goldwater**. The reason I am asking, you have to have a frontline antihelicopter weapon. I think the Divad is a wonderful idea and why it can't be made to work is beyond me. In fact, I think just having 2 40-caliber cannons out there pointing them someplace in a helicopter will scare him even without radar.

So, let's keep with that. If the radar is not going to work, I would give it up and depend on the old normal sight.

General **Wickham**. As you know, it is a F-16 radar.

Chairman **Goldwater**. I know it is, but it works better in the nose of a Mach-2 aircraft than it does in the nose of a Mach point nothing tank.

HOUSING

You are directing attention to the problem caused by inadequate housing for your enlisted and junior officers.

General **Wickham**. Yes, sir, we have funds, as I indicated earlier, in the budget to help with that. Senator Wilson and I have talked about that and I believe with congressional support here across the board, we will be able to deal effectively with housing.

Chairman **Goldwater**. I don't have any more questions.

I notice Senator Kennedy has arrived. So, Senator.

Senator **Kennedy**. Thank you, Mr. Chairman.

I apologize for being late for the presentation. I just want to extend a warm word of welcome to both of our leaders this morning.

I have just a few areas, if I could get your response and your reaction.

I think Senator Warner has certainly made a good point with regard to the communications equipment and the issue which that presents. It is a matter which I wanted to draw attention to. I think the record, as I understand, has been addressed and I look forward to following that closely.

JOINT TACTICAL FUSION

In a different area, the Joint Tactical Fusion Program, a critical effort to take advantage of the sensors and the intelligence, this program, as I understand, has been plagued with uncertainties and complexities in system design and deployment concept.

Could you address that issue and tell us what the current status of the program is? Is there any way we can take advantage of the earlier work to allow earlier fielding of perhaps valuable, but less costly, systems?

General **Wickham**. As you know, Senator Kennedy, the Joint Tactical Fusion Program is part and parcel of an Air Force-Army program, but it is also part and parcel of our ability to conduct modern operations on the battlefield. Joint Tactical Fusion is to integrate all-source intelligence including intelligence from JSTARS [joint surveillance and target attack radar system], deep surveillance and tactical reconnaissance system satellites with aircraft that see deep. Part of the attack capability is JTACMS the joint tactical missile system reaching out a long way. The Army will have some of those systems as will the Air Force. There is a synergism that comes from those three programs and we are pursuing this in the Air Force and the Army.

Senator **Kennedy**. As well as the AWACS system?

General **Wickham**. AWACS can interface with the JSTARS. JSTARS is a specific type of system of radar to acquire information.

The Army is procuring this joint tactical fusion capability to put with every division. The Air Force is procuring a far less number, generally to put them with tactical Air Forces as opposed to a lower unit. Of all those systems, the Joint Tactical Fusion Program is the most advanced and the lowest risk in terms of achieving an effective capability. I am encouraged by the opportunity that the fusion program provides for bringing together all-source information so that the commanders can make real time decisions about attacking targets that are deep.

Senator **Kennedy**. When will it be deployed or available to field personnel?

General **Wickham**. We plan to have some, what you might call brass board modules or initial test modules, with the 9th Division out at Fort Lewis late this year. We are looking to full-up deployment of the system several years beyond that.

Senator **Kennedy**. Do the reductions from last year affect the program at all?

General **Wickham**. I guess the stock answer would be any reductions would affect the program. I can't say specifically what those reductions were and how they affected it, but we are still pressing ahead with the 9th Division.

IDENTIFICATION FRIEND OR FOE

Senator **Kennedy**. On the Patriot and identification issue, as I understand, you are in the beginning of the deployment and that is certainly an encouraging step.

Could you tell us a little bit about the IFF system and the procedures that are developed to assure the effectiveness of that particular system?

General **Wickham**. Senator, if I might give you a classified answer for the record with regard to that because of the sensitive nature of Identification Friend or Foe with our allies.

[The information follows:]

PATRIOT IDENTIFICATION FRIEND OR FOE [IFF]

Patriot uses the Mark XII IFF (Identification, Friend or FOE), the system used in our other U.S. air defense systems. In addition, Patriot has an expanded, passive identification (ID) procedure that automatically evaluates the target's compliance with the air space control measures in effect. This procedure also incorporates the IFF response information from the Mark XII. The ID process, at the operator's option, can be totally automatic with a manual override capability, or it can be used solely to provide data for manual evaluation and decision. In either of these two modes, the results are automatically distributed to the entire Air Defense community. The Patriot ID procedure has been extensively tested, most recently in Follow-on Evaluation III, and has demonstrated that it is timely, accurate, and highly effective.

Senator KENNEDY. Is there a problem and are you addressing it?

General WICKHAM. We are addressing it. There is a problem.

Senator KENNEDY. Is progress being made?

General WICKHAM. There is a problem with our allies and among our services. There is a lot of money involved, billions of dollars, in developing a very effective identification friend or foe system because you have so many men out in the battle zone with Stinger missiles and they will have to have a device there that will be able to query and get a response out. So, when you produce these sophisticated devices in large numbers, it is an expensive undertaking. It is a problem and we are working on it.

Senator KENNEDY. How satisfied are you with the progress that is being made?

General WICKHAM. I am satisfied that we are making good progress.

MOVING COSTS

Senator KENNEDY. Another is the issue of moving costs. We had some discussion of it last year. It is something that we are considering with the whole issue of compensation. We went through the various figures on the cost of moving, the failure of the Congress to keep pace with this kind of issue.

Is there anything you would like to tell us about the current PCS [permanent change of station] reimbursement and what you think is the priority of that issue in your own mind?

General WICKHAM. The whole area of reimbursement for moves is worthy of very careful review. We have capped the weight allowances for people to move. Probably a third of those who move have to pay out of their pocket because of that capped weight allowance, which I think is capped off at about 13,000 pounds now. We have a proposal to go to 18,000 pounds. Young soldiers, E–4's and below, have an allowance to move only 225 pounds. We want to change that and there is a proposal to fix that.

I think there is another area that Senator Wilson and I have chatted briefly about. Young soldiers who move into high-cost areas do not have enough allowance to help in finding a home and putting an up front deposit to rent a house. There can be some adjustments there to help these young soldiers.

Senator KENNEDY. Will you give us some recommendations on this issue?

General WICKHAM. Yes, sir. We have a comprehensive slate of those.

Senator KENNEDY. It is worthwhile to the extent we can to get that prior to the time we mark up our bill because we want to address it this year.

SPECIAL OPERATIONS FORCES

We notice that in the presentation there is a very dramatic increase in the special operating forces. From 1983 to 1986 it has gone from somewhat less than 7,000 to somewhat less than 11,000. The cost of the program has doubled, 1984 to 1986.

The forces obviously provide a degree of flexibility and provide against a broad range of contingencies, but also raise questions about what their doctrine is going to be and what their employment or deployment is going to be.

I don't know what the desire of the chairman is on this issue, but I would hope that we may have an appropriate opportunity, it might have to be in closed session, to discuss fully, including the joint operations program about the additional requirements for the buildup, what their assignment is, and what the current planning is for their end use and deployment.

Secretary **MARSH**. I will make a point there that when you look at the special operations forces, you are referring also to the Rangers as well as the Special Forces, sometimes called the Green Berets.

Senator **KENNEDY**. My time is up. If I could, Mr. Chairman, just conclude with this thought.

Does that represent in terms of the increase less than 7,000 to less than 11,000?

Secretary **MARSH**. I can give you that figure precisely. The Special Forces or Green Berets are the most significant portion of that. There are some Rangers included in that. For example, we organized a ranger battalion last year.

Senator **KENNEDY**. If you could submit for the record the makeup.

[The information follows:]

MAKEUP OF SPECIAL OPERATIONS FORCES [SOF]

Yes, the strength of Active Army Special Operations Forces increases from less than 7,000 in fiscal year 1981 to a programmed total of approximately 11,000 by the end of fiscal year 1986.

Army Special Operations Forces are composed of Psychological Operations, Rangers, Special Forces, Civil Affairs, and Special Operations Aviation units both in the Active and Reserve Component.

The following breakout reflects the composition of the Army's Special Operations Forces by Active and Reserve Component and indicates the programmed increases in strength for each type unit by the end of fiscal year 1986.

Unit	Active strength	Reserve strength
Headquarters, 1st Special Operations Command	327	(1)
Headquarters, U.S. Army John F. Kennedy Special Warfare Center	873	(1)
Special Forces	5,348	5,741
Rangers	1,855	0
Psychological Operations	971	3,044
Civil Affairs	172	4,649
Special Operations Aviation	818	230
Total	10,364	13,664

[1] Not available.

[Deleted.]

Secretary **Marsh**. We brought on a Special Forces group. There are some additional plans for further expansion of that force. They are used not just in the low intensity conflict areas, their principal use, but these forces are also being used with the light conventional forces for raids, reconnaissance, and intelligence. This takes you into the area you are talking about on the doctrine for their use.

Senator **Kennedy**. My time has expired, Mr. Chairman, but I would like to pursue this either with you or with the Department about the makeup of this group in terms of manpower.

I think we are familiar with the Green Berets and Ranger Force. But we need to know which others are being assigned to Beret units and what their mission and doctrine is.

General **Wickham**. The rest is not growth. The growth is just Rangers and Green Berets. That is 99 percent of your growth.

Chairman **Goldwater**. Senator Wilson.

RECRUITING AND RETENTION

Senator **Wilson**. General Wickham, what single factor is most important in terms of, first, recruitment and, second, retention of a first-time enlistee?

General **Wickham**. I would think the living and working conditions for the first-time enlistee—half of them are not married—are important. That the soldier feels he is well taken care of and that he has fine equipment to work on and leadership that brings all of the good qualities out of him are important also. So, continuing the congressional support to construct new barracks, getting the soldiers out of World War II barracks, and Korea Quonset huts, is in keeping with that.

Those who are married, where they see housing is being built for them, that medical care is solid, dental care available for dependents, and we are taking care of the families, that will keep the married first termer in the service. They are all people-oriented needs.

Congress has done so well by that. I know the chairman has said it is a big success story. A lot of the praise goes to Congress for putting the resources there that enable us to attract and keep quality people. I just say keep after it, keep providing that kind of support.

Secretary **Marsh**. I think there is a given attitude by people in the Army and Army trainers that one of the most deadly things that could happen—good training will produce reenlistment—is if you have boredom in training, you have some rather severe problems. I think the quality of the training that is occurring today in the basic training centers and advanced training centers by the noncommissioned officers who have responsibility for that, is excellent and they are making it interesting and, consequently, very challenging to these young people. That is a fact.

Senator **Wilson**. General, did I understand you to say that roughly half of the first enlistees are married?

General **Wickham**. I can't tell you the first enlistees, but 54 percent of the active Army is married.

Senator **Wilson**. That is all grades?

General **Wickham**. All grades. The bulk of married soldiers are in the lower grades since we have 700,000 children with these families and half of those children are under age 6. So, they are all basically concentrated at the E-6 and below level.

Senator **Wilson**. How many of those who reenlist are married? Do you have a percentage on that?

General **Wickham**. I can give that for the record, sir.

As to reenlistment, probably close to 70 percent are married.

[The information follows:]

REENLISTMENT—MARRIED SOLDIERS

In fiscal year 1984, 69.3% of soldiers reenlisting were married. To further break this down, 47.1% of first term reenlistees were married, 76.7% of midterm reenlistees were married, and 89.6% of the career reenlistees were married.

Senator **Wilson**. What is the average age of the reenlistee?

General **Wickham**. It depends. Your first termers would be reenlisting probably at age 21 or 22 and that is the bulk of your reenlistment. So, I suspect the average age of reenlistment in the Army, all NCO's considered, is probably in the neighborhood of 25 or 26. That is the average.

Senator **Wilson**. One final question and then my time is up.

Has there been any kind of study made that would differentiate between the performance of the young married and the young single soldier?

Secretary **Marsh**. Not to my knowledge. We can check that and get back to you and give you information on it, Senator. It is an interesting question.

[The information follows:]

PERFORMANCE—MARRIED SOLDIERS/UNMARRIED SOLDIERS

No, the Army has not conducted any research aimed at identifying the possible impact of economic, housing, and family concerns on first-term, married soldier performance.

Senator **Wilson**. It is a question that comes in part from the conversations I have had with General Wickham before.

It seems to me that through no fault of their own, the young married soldiers are likely to suffer more anxiety than their single counterparts arising from economic difficulties, some having to do with housing.

I was curious as to how it was seen to affect performance.

Secretary **Marsh**. We will have to get something for you. I don't know right off, I can't calculate it.

[The information follows:]

PERFORMANCE—MARRIED SOLDIERS

Young married soldiers and their families do suffer considerable stress resulting from the economic and other hardships of military life. Certainly, this affects performance. We have not, however, compared the performance of married vs. unmarried soldiers. The Army is committed to improving the quality of life of all of its soldiers, and of its families.

Chairman **Goldwater**. Senator Levin.

Senator **Levin**. First of all, let me commend both of our witnesses this morning on the improvements that we have seen and their role in it. I think that General Wickham probably got the highest praise that can be given when yesterday one of our colleagues addressed General Vessey as Chief of Staff.

In any event, both of you deserve our commendation for your work.

I have additional questions.

I do understand from Senator Dixon's staff that he has been delayed because of weather, but he wants to reassure all of us that he will report to the Chair and other members of the committee on his views on Divad as soon as he gets through that storm system.

He must be flying in a civilian plane. I can't believe he is flying military or he would be here by now.

CHEMICAL WEAPONS

I want to ask a few questions about chemical weapons. You are again seeking funds to begin the production of binary shells.

Has any NATO government agreed to store binary weapons other than us?

Secretary **Marsh**. Senator, I am not in a position to answer that. I suspect the best source for that answer would have to come from Defense.

Senator **Levin**. That is not a real issue in terms of their military viability for you?

Secretary **Marsh**. There has been no view communicated to me as to what their position is on that.

Senator **Levin**. You don't know of any reluctance on the part of NATO countries to store binary weapons?

Secretary **Marsh**. I am really not in a position to answer that. We simply function as executive agent for the Department of Defense in the whole chemical program.

General **Wickham**. I think it is in a classified area.

Senator **Levin**. You are not able to say whether or not there has been a reluctance.

General **Wickham**. No, sir.

Senator **Levin**. Or public reluctance? Has there been public reluctance?

General **Wickham**. I don't think we should say anything further about it in public.

Senator **Levin**. Fair enough.

WAR RESERVE STOCKS

You have a chart called "Sustainability Reinforcement." I don't know if you have the same chart. It shows improvement in the war reserve stocks. I think this is probably typical of a number of other areas we have been concerned about in terms of readiness and sustainability.

While there is improvement, there are still ways to go. Is that a fair summary of where we are?

Secretary **Marsh**. Yes, sir.

Senator **Levin**. Some of us worry more about the way to go and how far we have to go, relative to the other places we are putting our money, while others don't. Nonetheless, I think it is fair to say that in this area we do have a shortfall.

My question, though, really is a question, first, of understanding why is it that we list our requirement as a percentage of procurement objective rather than a percentage of the required war reserve?

Secretary **Marsh**. Because it is classified, Senator. I tried to give you a chart that was unclassified. The 100 percent that is on the left abscissa there for munitions and war reserves on that chart is classified. The 100 percent equals *x* numbers of days of supply. If I put the days in there, it would immediately be secret.

Senator **Levin**. But we are showing a procurement objective which is very much different from our required war reserve: is that right?

Secretary **Marsh**. No. The 100 percent generally reflects the required war reserve to support deployed and deploying forces. You see 100 percent up there on the left? This is based on our Defense guidance and that is our near term requirement. That equals *x* number of days of supply of munitions deployed overseas. That is what we have done. We have reached 85 percent of that. If I gave you the days of supply, it would all be classified.

Senator **Levin**. Does that chart show us that we have achieved 85 percent of our war reserve?

Secretary **Marsh**. Yes, sir, of our overseas requirement.

Senator **Levin**. My time is up.

Chairman **Goldwater**. Senator Kennedy.

Senator **Kennedy**. May I ask, to continue that thought, what about the allies in NATO?

Secretary **Marsh**. As to the allies in NATO, sir, we are going to provide that classified input. The chairman asked for that. But they would be substantially below that.

Chairman **Goldwater**. Thank you, gentlemen. It has been a very interesting presentation.

Mr. Secretary, we are always happy to have you over here. We wish you the very best of luck.

Senator **Levin**. Could we have additional questions for the record?

Chairman **Goldwater**. Yes.

[Questions with answers supplied follow:]

Questions Submitted by Senator John Warner

THREAT OF CHEMICAL ATTACK

Senator **Warner**. Secretary Marsh, is Central Europe the only theater in which U.S. and allied troops face the threat of chemical attack?

Secretary **Marsh**. Information is classified and was furnished to the committee separately.

SDI

Senator **Warner**. Secretary Marsh, what role does the Army play in the President's Strategic Defense Initiative, and does the Army view this as a high priority program?

Secretary **Marsh**. The Army BMD Program executes SDIO tasks with funds provided by 5 OSD Program elements. The proposed Army portion of SDIO funding for fiscal year 1986 is $1,294.8M.

The Army has programs in four of the 5 SDI Program elements.

They are: Surveillance, Acquisition, Tracking and Kill Assessment (SATKA); Directed Energy Weapons (DEW); Kinetic Energy Weapons (KEW); and Systems Analysis/Battle Management (SABM).

Included in these four PEs are the following Key Technology Demonstrations in addition to other technology efforts: Airborne Optical Adjunct; Terminal Imaging

Radar; Endoatmospheric Intercept; Exoatmospheric Intercept; Terminal Defense System; Free Electron Laser; and Neutral Particle Beam.

PROPOSED FUNDING OF ARMY PROGRAMS

[In millions of dollars]

RDTE	Fiscal year 1985	Fiscal year 1986
SATKA	303.1	562.6
DEW	75.8	192.5
KEW	175.7	458.1
SA/BM	29.9	81.6
Army SDI Total	584.5	1,294.8
SDI Total	1,397.28	3,722.18
Army (percent)	41.8	34.8

The Army fully supports the President's Strategic Defense Initiative Program. The Army has centralized the management of SDI directed tasks within the Ballistic Missile Defense Program which has provided continued technological leadership in the BMD field for nearly three decades.

ANTI-TACTICAL MISSILE [ATM]

Senator **WARNER**. General Wickham, aside from upgrading the Patriot and Hawk for self-defense purposes, what is the Army doing to address the very serious threat posed to U.S./NATO forces by Soviet short-range ballistic missiles like the SS-21, SS-22 and SS-23—not to mention the longer range SS-20?

General **WICKHAM**. The Army has developed a counterforce program that will provide for [deleted] engagements using the JTACMS-A missile as the delivery vehicle. A "smart" warhead is to be developed to target and engage the launchers and/or control nodes using optical or other sensor technology. Tactical missile countermeasures also include electronic warfare, passive countermeasures such as frequent moves and hardened sites, and unconventional warfare. Terminal defense of key assets and air defense site is also an element of the ATM system. Patriot and Hawk air defense systems will be modified to provide the capability to counter inflight [deleted] (or other targets that are acquired and identified as threats). The [deleted] to the central region is one topic in an Army analysis of the TM threat and projected defensive capabilities. The results of this study will establish the Army plan to counter the [deleted]. The Army has [deleted].

MODERNIZATION OF CHEMICAL STOCKPILE

Senator **WARNER**. General Wickham, how critical to our efforts to deter conventional and nuclear war is the modernization of our chemical stockpile with modern binary munitions, and what priority does the Army attach to this program?

General **WICKHAM**. Modernizing our chemical retaliatory capability is an absolutely essential element in our efforts to deter war. Our current lack of a militarily effective chemical retaliatory capability invites the use of chemicals against us. The overwhelming Soviet chemical warfare advantage could very well negate much of the recent expenditure we've made in fielding highly sophisticated weapon systems. The early initiation of chemical warfare by the Soviets, our lack of ability to respond in kind, and the resulting increase in the Soviet pace of battle could lower the nuclear threshold so quickly that our ability to stop an unchecked Soviet advance with nuclear weapons would be virtually eliminated.

One of the highest priorities the Army has is modernizing our chemical stockpile. To this end, we have requested fiscal year 1986 funds to start production of the 155mm binary chemical projectile, build production base facilities in support of the Navy's Bigeye bomb program, and prepare for destruction of existing chemical weapons. We are committed to this modernization program which is key to restoring a meaningful chemical warfare deterrence, moving ahead in ongoing efforts to ban chemical weapons altogether and, in the long term, maintaining public safety around our storage sites and providing a safe munition for our soldiers to handle.

ADEQUACY OF UNITARY CHEMICAL WEAPONS

Senator **Warner**. General Wickham, would you comment on the adequacy of our current stockpile of unitary chemical weapons for deterring chemical war effectively?

General **Wickham**. Our current chemical stockpile does not provide us with a credible deterrent to chemical warfare and I am firmly convinced that the Soviet's have a clear appreciation of this fact. The present stockpile doesn't provide our field commanders the ability to effectively respond on today's modern battlefield. The stockpile has become obsolete with the average munition age now some 26 years. We have no effective capability to hit targets on the battlefield with chemical agents beyond artillery range. Even the artillery munitions we do have are too few to meet minimum response requirements. The majority of our stockpile is in bulk agent one ton containers that we can't use because we lack both a fill capability and useful munitions to put the agent in.

Another major concern I have is the safety aspect of our current stockpile. The munitions in storage locations across our country contain the deadly chemicals that would be used on the battlefield. This stockpile is hazardous to maintain and would be dangerous for our soldiers to deploy when required.

A fully modernized stockpile of binary munitions will provide us a credible deterrent and at the same time provide us with a safer, militarily more useful, and smaller stockpile.

VULNERABILITY OF NATO INSTALLATIONS

Senator **Warner**. General Wickham, would you comment on the vulnerability of important NATO installations like ports, air bases and POMCUS sites to long range Soviet chemical attack?

General **Wickham**. All our installations that are vital to supporting a war effort in Europe are extremely vulnerable to a Soviet chemical attack. Although we have no credible deep strike capability, the Soviets have developed a number of chemical munition delivery systems like the SS-23 SCUD missiles and chemical munitions for aircraft which can hit any of our support facilities deep in our rear with persistent chemical agents. When these facilities are hit with a persistent chemical agent, we will take casualties but we will also suffer an unacceptable level of degradation. The degradation is caused by the soldiers and civilians working at these facilities being forced to wear chemical protective gear. The ability of these facilities to support the war would be reduced upwards of 50 percent. If this happens and we cannot force the same level of degradation on him, the resulting increase in the Soviet pace of battle could lower the nuclear threshold so quickly that we will not have the opportunity to effectively use our nuclear weapons to check his advance. This is particularly true if our C^3I capability is degraded as expected in a chemical environment.

We, on the other hand, do not have the capability to strike deep with persistent chemical weapons and the asymmetry I described will in fact occur. The chemical stockpile modernization program is absolutely essential to ensure we don't find ourselves in this situation.

SOVIET CHEMICAL WARFARE THREAT

Senator **Warner**. General Wickham, is it possible to address the Soviet chemical warfare threat through defense measures alone?

General **Wickham**. No. Chemical defense is absolutely necessary but does not replace the need for having a credible chemical deterrent. Chemical defense alone will not deter a chemical attack against us. History gives us the best example of this. In World War II, both sides believed the other had a chemical capability, therefore, chemicals were not used.

The one sided use of chemical weapons against us could very well be decisive in the outcome of the war. Protection measures alone will reduce our soldiers ability to fight by as much as 50 percent. This means a greater chance of being killed, less effective rifle and crew served weapons fire, and a significant reduction in our ability to get aircraft into the battle. Chemical protective gear degrades mobility, dexterity, vision and ability to communicate. This degradation would negate much of the recent expenditures we've made in fielding highly sophisticated weapon systems and would reduce our overall combat effectiveness to an unacceptable level.

Our defense equipment is good and is "state of the art" for the foreseeable future. This means we will be forced to live and fight degraded from chemical weapons well into the future if we cannot deter chemical warfare. Re-establishing a credible chemical retaliatory capability is absolutely essential along with maintaining a strong defense posture.

LIGHT AND MEDIUM ANTI-TANK WEAPONS

Senator **WARNER**. General Wickham, the Army is in dire need of new Light and Medium Anti-tank weapons. This seems even more urgent with the continuing improvement of Soviet armor technology and your increased emphasis on light forces. Would you describe to me your efforts on both the Light and Medium Anti-Armor weapons systems you are working on.

General **WICKHAM**. The Army is evaluating an improved version of the M72A3 Light Assault Weapon (LAW). Currently designated M72E4, this improved LAW provides greater range, accuracy, and lethality while retaining length and weight characteristics similar to the original. We are also evaluating the Swedish AT-4 as a possible complimentary weapon. Production and procurement decisions for these weapons will be made after type classification currently scheduled for Aug. 15, 1985.

As a result of extensive tests conducted in 1983, it was determined that none of the existing LAW-type weapons could provide the results we desired against tanks. As a result, we now rely on medium and heavy weapons such as Dragon and TOW as our primary anti-tank systems. The Advanced Anti-Tank Weapon System—Medium (AAWS-M) will be a manportable weapon employed by dismounted infantry at the company level to defeat current and advanced Soviet armor. AAWS-M, which will replace the Dragon system, will address the deficiencies of that system and will possess sufficient growth potential to counter all evolving armor threats.

LIGHT INFANTRY DIVISIONS

Senator **WARNER**. Secretary Marsh, I commend you and General Wickham for the efficient and effective manner in which you have managed the resources of the Army in that you have held down increases in active duty personnel strengths while, at the same time, plan to add two new light divisions to the force structure within existing resources. Despite the fact that, as you state, 70% of terrain in Europe is not well suited for armor units, I remain concerned about the utility of these light divisions in the European theater due to their relative lack of mobility, firepower, and armor protection. Would you describe please how you envision these light divisions could be employed in Europe. I have also heard that these divisions will eventually be armed with light lethal weapons. Would you describe some of these type weapons?

Secretary **MARSH**. The Army's AirLand Battle doctrine provides the basic principles for combat operations across the spectrum of conflict, from the more likely low intensity conflict to the least likely but most threatening high intensity conflict. The Army designed its light divisions for application primarily in low intensity conflict scenarios. Their rapid deployability enables them to arrive in a crisis area before a conflict begins. By demonstrating U.S. resolve and capability, they may well prevent the outbreak of war. This is particularly so where low to mid intensity conflict threatens, when their presence could decisively affect the outcome.

Light divisions have utility for high intensity conflict in support of NATO. From bases in the U.S. these divisions will be capable of rapidly reinforcing forward deployed U.S. forces.

Upon arrival in Europe, the light infantry division could be employed throughout NATO's area of responsibility. NATO's rugged northern and southern flanks are clearly areas where light infantry can be more effective. Furthermore, the Central Region which includes the North German Plain and the Fulda Gap, have many areas of rough, wooded terrain that is best suited to light infantry forces. All heavy division sectors in the Central Region can employ at least one light infantry brigade on appropriate terrain; other heavy division sectors could accommodate entire light infantry divisions (approximately 30% of West Germany is forested terrain 15% is urban and wetlands raise the percentage higher).

Since Light Infantry units are employed in restricted terrain and are generally given missions to retain that terrain, their transportation requirements for trucks and combat vehicles are minimal. When cross-attached with heavy divisions, light infantry units receive support from the heavy divisions. Therefore, light divisions do not have unique augmentation needs when employed as envisioned by their operational concept. Moreover the light divisions do have organic mobility. Each division will have enough helicopter lift to move the combat elements of an infantry battalion in one sortie and vehicle lift for the combat elements of another infantry battalion. By cycling transport, the division can move forces as the tactical need warrants.

Light infantry divisions when employed to reinforce forward deployed forces in NATO would be used primarily to cross-attach with heavy forces on appropriate terrain, in the main battle area. Light infantry enhances the conventional deterrent by increasing NATO's ability to match forces to the terrain. Light infantry employed in difficult terrain frees mechanized and armored forces for employment elsewhere where their mobility and firepower can be used offensively for more decisive effect.

The light infantry division will be equipped with standard weapons. The individual soldier's weapons (rifles, machine guns, grenade launchers, pistols) constitute the greatest in quantity. Other weapons systems in the division include mortars (both 60mm and Improved 81mm), 105mm and possibly 155mm artillery, anti-tank missiles (TOW and DRAGON), and attack helicopters. Each of these weapons may be improved or upgraded as part of an Army wide program, but no special weapons are being developed for the light infantry division.

FAMILY ISSUES

Senator **WARNER**. Secretary Marsh, I would like to commend the leadership of the Army for your initiatives on improvements in the quality of life and on family issues. Would you describe what you see as the most important quality of life and family issues which we should concentrate on this year.

Secretary **MARSH**. Across the board construction projects that improve the living and working conditions of our soldiers and their families remain high on our priority list. We have requested a record number of child care facilities and family housing units which need support if we are to continue to reduce our documented deficit. There are a number of other new initiatives aimed primarily at improving the quality of life of our junior enlisted force. These include increased household goods weight allowances, increased permanent change of station allowances, better home based child care, and financial counseling services. These new programs, coupled with increased funding of our traditional services, represent a balanced approach aimed at increasing retention and readiness.

ARMY FORCE STRUCTURE

Senator **WARNER**. General Wickham, over the past few years, we have seen the Army's experiments with the 9th Infantry Division, referred to as the High Technology Division. Now you are planning to organize within existing resources two new 10,000 man light infantry divisions. Could you describe for us what you envision as the ideal structure that our Army should have in terms of numbers of heavy, light and special mission (Air Assault, Airborne) divisions and provide the rationale for your proposed structure.

General **WICKHAM**. [Deleted.] A division force equivalent is a notional unit consisting of a fully structured division with all the support necessary to provide war fighting and sustaining capabilities. It includes the division and all non-divisional combat, combat support, and combat service support units required to support the division within the theater of operations. The Army's ideal force provides a reasonable assurance of achieving the national military strategy and contains the flexibility necessary to meet low-to-mid intensity conflict contingency requirements.

The Army's objective is to achieve the optimum balance between forward-deployed and U.S. based forces, between heavy and light forces, between combat and support forces (tooth to tail ratio) and between forces allocated to Active Army and Reserve Components. With the activation of the 10th Mountain and the 6th Light Infantry Divisions in the Active Component (AC) (but with a part of each division in the Reserve Component), and the 29th Light Infantry Division in the Reserve Component (RC), the Army will attain a force of 14 light divisions (8 AC/6 RC) and 14 heavy divisions (10 AC/4 RC). This balanced force structure will provide an improved capability to meet the expanding Soviet Threat, and significantly enhance our capability to respond to low-to-mid intensity contingency requirements, to protect national interests and to deter the escalation of any local conflict to a higher level of conflict.

QUESTIONS SUBMITTED BY SENATOR DAN QUAYLE

5-TON TRUCK

Senator **QUAYLE**. Secretary Marsh, the Army had originally indicated a rebuy without changing any powertrain specifications. Then it indicated it planned a rebuy for which specifications on the complete powertrain would be opened to the competitive bidding; finally, it asked for approval of a rebuy with only the engine open to competition. Why did the Army change its mind, particularly with respect to changing from opening the complete powertrain to opening the engine only?

Secretary **Marsh**. The Army planned to open certain components of the 5-ton to competition in order to enhance price competition for the proposed 5-ton contract. Opening the engine only to competition presents minimum risk and negligible logistics impact. In addition, opening the engine to competition will allow for accommodation of anticipated changes in emission standards.

Senator **Quayle**. Secretary Marsh, is the planned rebuy of 5-ton trucks (3 years plus 2 fixed price, one-year options) intended to be the final buy under a mature program that has been in existence since 1969, and before a new 5-ton truck design and design and acquisition program goes into production around 1990?

Secretary **Marsh**. The current 5-ton truck program has been on-going since 1981. Though the current design can be traced to a design which originated in 1951 and was modified in 1969 with the introduction of the Cummins NHC-250 engine, the current trucks produced are substantially improved over the earlier configurations. Sixty percent of the current truck (M939) is different from the 1969 version (M809). This rebuy is intended to be the last procurement of this truck. The Army intends to replace this series with a new design truck of this weight class which has substantially greater mobility, is smaller, has better air transportability characteristics, and a higher payload to weight ratio. Procurement of the new truck is planned for fiscal year 1990.

Senator **Quayle**. Secretary Marsh, is the purpose of competition in procurement to yield equal or better cost, and/or performance, and/or quality, and/or delivery, and/or availability, and/or maintainability? If not, what are the purposes?

Secretary **Marsh**. The purpose of competition in this procurement is to obtain the best price for a vehicle that meets the Government's essential performance, quality and delivery requirements as specified in the solicitation package.

Senator **Quayle**. Secretary Marsh, why is final rebuy calling for competition for only the engine with all other specifications frozen?

Secretary **Marsh**. Competition of the engine only will permit broader competition with negligible technical risk and negligible logistics impact.

Senator **Quayle**. Secretary Marsh, will any other drive-line component specifications be changed? If so, what are those changes?

Secretary **Marsh**. No.

Senator **Quayle**. Secretary Marsh, is the Army dissatisfied with the current engine with respect to performance, quality, delivery, availability, maintainability, reliability, durability, cost or any other factor of importance to the mission of the 5-ton truck?

Secretary **Marsh**. The Army is satisfied with the Cummins NHC 250 Engine currently installed in the M939 5 ton series vehicle. However, it does not represent the latest state-of-the-art technology available in more modern engines commercially available to the truck transport industry. Moreover it will not in its present form be compliant with proposed federally mandated EPA Emission Control Standards.

Senator **Quayle**. Secretary Marsh, how would the Army rate its experience with the current engine in the 5-ton truck? Poor, Fair, Good, Very Good, Excellent.

Secretary **Marsh**. Our experience overall has been satisfactory.

Senator **Quayle**. Secretary Marsh, has the engine manufacturer offered to provide the Army with the most advanced version of the current 5-ton truck engine which is one model in a series of 855 cubic inch displacement engines offered to the commercial marketplace by the manufacturer at the same price as the current engine? Has the Army ever accepted this offer? If not, why not?

Secretary **Marsh**. The Army has no record of such a formal proposal.

Senator **Quayle**. Secretary Marsh, does the current engine meet the 1985 EPA emission requirements? Has it been certified for model year 1985 emission standards?

Secretary **Marsh**. Yes.

Senator **Quayle**. Secretary Marsh, does the current engine meet Buy-America requirements?

Secretary **Marsh**. Yes.

Senator **Quayle**. Secretary Marsh, one of the arguments given for the engine-only competition in the planned 5-ton truck rebuy is that it is not usual commercial practice for truck fleets to change engines. What is the Army's understanding of commercial practice with respect to engine changes—describe step-by-step the usual commercial process by which an engine manufacturer persuades the owner of the truck fleet powered by another manufacturer's engine to change engines. How much testing in actual trucks running over the road under actual commercial operating conditions is involved before a decision to change engines is made? How does the commercial trucker evaluate alternative engines when considering a changeover to ensure that a change would provide his business a net benefit to justify the change?

Secretary **Marsh**. It is not uncommon for engine manufacturers to provide components on consignment and cover costs for installation, parts, and return of vehicles to original configuration. Sample size and time period depends upon variables such as fleet size and fleet operations. Mileage accumulated depends on size of consignment engine provided to the fleet operator and application and time period agreed to between vendor and fleet owner. Reasons for swapping an engine have been based in the past on considerations such as: cost fuel efficiency, reduced lubricating oil consumption, improved mean times between scheduled and unscheduled maintenance actions, improved mean time between overhauls, reduced repair parts cost and improved vendor service organization with respect to customer support. As the Army's tactical 5-ton truck fleet application and usage is quite different from that of a line-haul fleet operator, mileage comparisons between the two are inappropriate. The average yearly mean miles for a 5-ton truck is between 2,500 and 3,000 miles compared to 100,000 plus miles per vehicle in a line-haul fleet.

Senator **Quayle**. Secretary Marsh, how does the proposed engine-only competition compare to commercial practice with respect to engine changeover?

Secretary **Marsh**. The proposed follow-on procurement of the M939 5-ton truck with engine-only competition compares favorably to what is done in the commercial market place once allowances are made for differences between operational profile, yearly mileage, and terrain condition encountered. A typical line haul transport fleet that accumulates 100,000 plus miles per truck in a year on paved interstate can not be compared on the basis of mileage to a military tactical truck whose mission entails, on the average, 3,000 miles per year over primary and secondary roads, trails, and level and hilly cross country operations, and experiences less than 100,000 miles in its total 20-year life.

Senator **Quayle**. Secretary Marsh, I am informed that in commercial practice a prudent fleet owner would never change from a satisfactory engine to a different engine without first operating and evaluating several seed engines in his fleet for 300,000 to 500,000 miles under commercial operating conditions to ensure that the new engine will provide net benefits under actual operating conditions and will be at least as well suited to the mission of the fleet as the existing engine. I also believe the House Appropriations Committee required as a condition of its approval of this planned rebuy, that the "procurement strategy must include adequate testing of the engine in the truck prior to contract award." Finally, I am informed that the preliminary specifications call only for certain bench tests and a 3,000 mile defined course prior to contract award. In light of commercial testing practice, which the Army has said is a model for this rebuy, how can such limited pre-awarded testing ensure that the winning engine will be suitable for the 5-ton truck mission and will provide net benefits to the program under actual operating conditions? How can this proposed testing satisfy the Congressional requirement for adequate testing of the engine in the truck prior to contract award?

Secretary **Marsh**. The prime contractor will be required to provide warranties for performance, workmanship and materials and design conformance for the truck and its components. It is the Army's belief that the commercial certification, 400 hour NATO dynamometer lab test, and 3000 mile durability test over a yearly mission profile conforms to the congressional directive to conduct "adequate testing prior to contract award." Subsequent to award, but prior to production release, the truck manufacturer is required to complete a 40,000 mile component qualification test, a shakedown test prior to production, and an Initial Production Test (IPT) which will accumulate in excess of 100,000 miles. This total testing will ensure that production trucks meet Army requirements. To duplicate the entire test for each proposal prior to award would be a waste of contractor and tax-payer dollars, and would create an unacceptable delay in truck deliveries with no appreciable reduction in risk.

Senator **Quayle**. Secretary Marsh, does the proposed limited pre-award test create incentive for bidding the least expensive, smallest displacement, highest rpm engine that will satisfy these limited requirements? Does this create a risk of a winning engine that under actual operating conditions will be inadequate to the 5-ton truck mission? Would it be better to require extensive field testing prior to the award and create an incentive for manufacturers to bid both lighter and heavier engines to ensure both lower cost and adequate mission suitability goals can be achieved before contract award?

Secretary **Marsh**. The acquisition strategy requires that offerors submit technical proposals and bids for vehicles that fulfill all M939A2 system requirements. The engine specifications are a portion of these total system requirements. An engine must be selected that is currently available in the market place, marketed to the truck transport industry, and produced on a production line basis at power ratings which comply with the engine performance specification. The manufacturer will be required to satisfy specific testing requirements as part of the contract, including component qualification testing, shake-down testing, initial production testing and periodic comparison testing. The specifications, the pre-award qualification testing, vehicle testing and warranty serve to assure the vehicles meet our needs.

Senator **Quayle**. Secretary Marsh, what specific benefits does the Army expect to gain from the engine only competition?

Secretary **Marsh**. Specific benefits anticipated from competition of the engine are a vehicle which complies with EPA requirements, incorporates a commercially-proven engine, and is obtained at the lowest competitive price which fulfills all required performance specifications.

Senator **Quayle**. Secretary Marsh, what additional cost does the Army anticipate will arise from engine-only competition?

Secretary **Marsh**. Competition of the engine will likely result in additional costs for modification/changes to technical publications and the purchase and stocking of parts to support the new engine. It should be observed that there will be a spare parts impact regardless of the engine selected. Even the NHC/250 engine will require internal parts changes to comply with the future EPA requirements (just as it did to satisfy the 1985 requirements).

Senator **Quayle**. Secretary Marsh, how will the Army ensure that benefits exceed costs, that is that there will be net benefits from such competition.

Secretary **Marsh**. Testing of the vehicle prior to full-scale production and adherence to contract terms and performance specifications will ensure that the truck is procured at the lowest bid price.

Senator **Quayle** Secretary Marsh, what chassis design modifications will be necessary to accommodate other engines? Will the costs of such design changes be taken into the measure of total cost for each alternative engine in the bid evaluation process?

Secretary **Marsh**. Manufacturers must select engines that can be mounted in the M939 vehicle as presently configured. Details will not be known until Step I proposals are received. Any deviation or changes to the current vehicle configuration will be included in the manufacturer's bid price.

Senator **Quayle**. Secretary Marsh, will the measure of total cost used by the evaluation of each bid include any cost, in particular tooling and testing cost, for which the bidder seeks or the Army provides recovery in any manner?

Secretary **Marsh**. Tooling and testing pertaining to engine installation will be included in each manufacturer's bid price.

Senator **Quayle**. Secretary Marsh, I believe that the Congress also required that "consideration be given to the logistics support question raised by introducing a new source to the inventory." Won't changing engines mean added inventory, new part numbers, amended service manuals, added service training costs? Will these added costs be estimated and explicitly taken into account in evaluating alternative engines? How does the Army anticipate this will be done? If it is not done, how can the competition satisfy congressional requirements, and how can the public be reasonably certain that the competition will result in lower costs?

Secretary **Marsh**. A change in the engine for the M939A2 will require additions to the parts inventory, new parts numbers, modified technical publications and some training if the engine selected is not currently in the Army's inventory. The bid evaluation process will essentially take into account only the Government's costs to acquire the vehicle, certain initial spares and technical publications revisions. The Army's supply and maintenance system already deals with varied systems and engines and will accommodate those parts that may be unique to the selected engine.

Senator **Quayle**. Secretary Marsh, is there a current shortfall in 5-ton trucks that this rebuy is intended to address? Is this rebuy a critical or an important need of the Army and other services?

Secretary **Marsh**. Yes, this procurement of the M939 Series 5-ton truck is required to fill shortages. The 5-ton fleet is at 71% of the Army Acquisition Objective (AAO) and 18% of the fleet will be over age just prior to this buy. Additionally, this procurement will provide vehicles to support the fielding of new Army major systems, and does fulfill an important need of other services.

Senator **Quayle**. Secretary Marsh, what are the risks that the currently-planned competition will result in interruption of delivery between the end of the current contract and the start of the rebuy contract? What plan does the Army have for ensuring continual availability (non-interruption) without sacrificing pre-contract award assurance of mission suitability and equal or better overall performance?

Secretary **Marsh**. Current milestone schedule calls for no break in deliveries.

Senator **Quayle**. Secretary Marsh, have other major subcontracted components in other Army programs been open to competition for rebuys under on-going programs in the past? Is this proposed engine only competition unusual? Does this represent a new policy or is this for the 5-ton truck program only? If not a new policy, why is it being done for the 5-ton truck only?

Secretary **Marsh**. The Army is dealing with the truck manufacturer, i.e., prime contractor, in this program and is permitting alternative engines to be offered by the prime contractor in order to enhance competition. The Army is not dealing directly with subcontractors in this program.

Senator **Quayle**. Secretary Marsh, will the engine component of all other Army programs be open for competition in the future on the same basis that this 5-ton truck competition is actually held?

Secretary **Marsh**. Future procurement efforts will be addressed individually.

Senator **Quayle**. Secretary Marsh, what limitations on possible performance improvement will result from specifying that the transmission and axles are to be unchanged for the rebuy?

Secretary **Marsh**. None is expected.

Senator **Quayle**. Secretary Marsh, EPA has a rule-making pending that will tighten heavy duty engine emission standards for NO X and particulates, probably to take effect in 1988, but possibly in 1987 (final rules are expected in March 1985). Does the Army require 5-ton truck engines to meet EPA standards? Will the Army require bidders under the planned rebuy to certify that their engines will be able to meet both 1985 and 1988 (1987) standards? What effect will this pending EPA rulemaking have on the planned rebuy?

Secretary **Marsh**. The solicitation will stipulate EPA requirements.

Senator **Quayle**. Secretary Marsh, would it make sense to extend the current 5-ton contract for one year (one year rebuy under existing specifications) to ensure non-interruptability of delivery and to provide time to structure a competition that will be effective, promote the goal of improved procurement and provide 5-ton trucks well suited to their mission and protection of the taxpayers' interest?

Secretary **Marsh**. Current milestone schedule calls for no break in deliveries before delivery of the new vehicle which is expected to provide the benefits cited in your question.

Questions Submitted by Senator Jeremiah Denton

CONVENTIONAL CAPABILITY

Senator **Denton**. From the Army's point of view, if we were to eliminate nuclear weapons through treaty or technology ("Star Wars"), would we be able to deter aggression through the present balance of conventional forces?

General **Wickham**. Eliminating nuclear weapons will detract from our current capability to deter aggression. At present the Soviet Union and Warsaw Pact enjoy a significant advantage over the U.S. and our NATO allies in conventional forces. For example, the Warsaw Pact advantage in tanks and artillery is about 3 to 1. The best way to deter possible conventional aggression is to continue to improve our conventional forces and to encourage our allies to do likewise.

Senator **Denton**. If not, roughly what percent increase would it cost?

General **Wickham**. General Rogers has indicated that a 4% annual real growth in defense expenditures by each NATO nation would build conventional forces capable of defending NATO's interests and therefore deterring conventional aggression. In addition, Secretary Weinberger's 1984 report to the Congress on Improving NATO's Conventional Forces outlines programs and initiatives, such as Emerging Technologies, which would improve conventional forces and increase conventional deterrence.

Senator **Denton**. General Wickham, assuming the United States finds it not politically possible to make it work, would it be necessary to acquire or strengthen its capability in areas like chemical weapons?

General **Wickham**. Yes. We do not have a militarily effective chemical retaliatory capability. So, until we strengthen our capability in this area, we invite the use of chemical weapons against us. The Soviets have an overwhelming chemical warfare advantage which could very well negate much of the recent progress we've made in fielding our highly sophisticated weapon systems.

We must move ahead now with modernizing our chemical retaliatory capability. A full modernized chemical stockpile of binary munitions will provide us with a credible deterrent. If we were forced into a war where chemical weapons were used, a modern stockpile of binary weapons would allow field commanders to effectively employ chemical munitions in support of our national objective of bringing any enemy use of chemical weapons to a halt quickly and at the lowest possible level. This would give us a capability we do not have.

QUESTIONS SUBMITTED BY SENATOR SAM NUNN

TOW II MISSILE

Senator **NUNN**. Secretary Marsh, according to your posture statement, we have increased the production rates for the TOW II missile and the M1 tank over the rates you projected last year for fiscal year 1986. These programs have jumped around a lot. Last January you proposed to buy 18,000 missiles and in May you revised that to 6,000. Now you are proposing 20,100. The tank is the same story. Last January you proposed 720. In May you cut that down to 600. Now you are proposing 840. We welcome the higher rates of production. But what does this say about program stability in the Army?

Secretary **MARSH**. The Army's procurements are intended to provide a balanced force that meets the country's security needs within the Total Obligational Authority provided by the Congress. Additionally, good business practice mandates that we stabilize our programs as best possible. Variations in individual programs reflect the realities of changing circumstances, such as prior year authorizations that differ from Army requests. The Army responds to these to provide stabilization wherever feasible.

EFFICIENT PRODUCTION RATES

Senator **NUNN**. Secretary Marsh, you have 18 major weapons programs included in this year's budget request. How many of these 18 are at maximum economic production rates? How many are at minimum economic production rates? Are you producing any below minimum economic production rate?

Secretary **MARSH**. Maximum economic production rates occur just before the existing or planned plant capacity, tooling, or test equipment, are exceeded. Minimum economic production rates occur when one is still making effective use of existing manufacturing facilities.

Within this framework, there are no major weapons systems being produced at the maximum economic production rate. The majority of them are produced between the maximum and minimum economic production rates consistent with affordability in a given fiscal year. Two systems, the M88A1 Recovery Vehicle and the UH-60A Blackhawk, are being produced at the minimum economic production rate.

Three major weapons systems (Field Artillery Ammunition Support Vehicle; M113A2 Personnel Carrier; and M577A2 Command Post Carrier) are being produced below minimum economic production rate.

The Field Artillery Ammunition Support Vehicle is being produced below the minimum economic production rate due to affordability in the overall context of the Army program. The M113A2/M577A2 Carriers are being produced below minimum economic production levels due to affordability and the Army's plan to maintain a warm production base with this family of vehicles.

PRODUCTION RATE STRETCH-OUTS

Senator **NUNN**. Secretary Marsh, of the 18 largest programs in the Army's budget request, five have had production rate stretch-outs in fiscal year 1986 compared to last year's plans for the year. How much does this stretch-out increase unit costs for these items?

Secretary **MARSH**. The stretch-outs increased the unit costs in the five programs as follows:

Divad: $110,000 per gun system.
Patriot: $51,000 per missile, or $8.42 million per fire unit.
Bradley Fighting Vehicle System: $10,908 per vehicle.
TOW II: $321 per missile.
Hellfire: $184 per missile.

POMCUS STOCKS

Senator **Nunn**. General Wickham, once the equipment for the six POMCUS divisions is in place, how long, in terms of days, will it take us to get our 10-division NATO commitment in place? What are the major obstacles remaining that prevent us from achieving 10 divisions in 10 days? What programs has the Army established to remove these obstacles?

General **Wickham**. The 10 division NATO commitment can be met in 10 days when the equipment for the six POMCUS divisions, associated support units, required support facilities and warehouses are in place and airlift capability is increased to [deleted] ton miles (MTM) per day. The major obstacles that we must overcome to achieve the goal are: availability of POMCUS warehousing, which is provided through the NATO Infrastructure; increasing airlift capability from 32.4 to [deleted] per day; prepositioning of POMCUS shortfalls within the limits of the congressionally mandated 70/50 criteria for division sets 5 and 6; and the lack of the Reichel logistic support facility in NORTHAG to receive, administer and direct POMCUS activities. Army is programming for POMCUS, transportation, storage site operation and coordinating availability of NATO storage facilities. We are also asking for congressional support for the Reichel facility for planning and reception of the AFCENT Reserve Corps which includes three POMCUS divisions and associated support units. The Army strongly urges continued congressional support for POMCUS and for the Air Force C5B and C-17 programs to achieve the necessary airlift capability.

DIVAD AND NONDEVELOPMENTAL PROCUREMENT

Senator **Nunn**. Secretary Marsh, in your statement you emphasized the Army's efforts to buy more "non-developmental" items which incorporate off-the-shelf technology and equipment where possible in order to field the system more quickly. That is exactly what we tried to do with the Divad system. Divad is now undergoing an extensive period of supplemental testing and has required an enormous development effort. How does the non-developmental procurement approach you outline in your statement differ from the approach we took with Divad? Why didn't this approach work for Divad?

Secretary **Marsh**. The Divad procurement approach differs from non-developmental procurement in that mature production hardware (M48 tank chassis, F16 fire control system and BOFORS L70 40MM guns) were integrated into a new system design using an accelerated acquisition strategy. The Army knew from the beginning that this would take development. Historically, it has taken 10 to 12 years to field a new weapon system. The Sgt York acquisition was designed to reduce that time, and as a result reduce cost. This strategy has succeeded on both accounts. Production of the Sgt York began more than five years earlier than it would have under a "normal" acquisition strategy. That time reduction directly converts to dollars saved which is estimated to be as much as one billion dollars.

Sgt York testing to date has done exactly what it was designed to do—tell us what needs to be fixed before the soldier has to rely on it. Contrary to some reports, our tests are demonstrating that the Sgt York is doing well. Non-critical failures and defects have been identified and have been or are being fixed. All new systems go through the cycle of test, fix and retest. Further testing in an operational environment in April and May will permit a thorough assessment of system maturity.

ARMY/AIR FORCE MEMORANDUM OF AGREEMENT

Senator **Nunn**. General Wickham, last May you and General Gabriel signed a Memorandum of Understanding between the Army and Air Force which was intended to reduce overlap and bring closer coordination between the services. Recently, I have learned that the Deputy Secretary of Defense has suspended initiative number 17 concerning helicopter lift for special operations forces. Were you consulted on this, General Wickham, before the decision was made by the Deputy Secretary? Was it your recommendation to suspend this initiative? I believe that one of the so-called Carlucci management initiatives was to free the military leaders to make military decisions. Is this recent decision by the Deputy Secretary consistent with the management initiatives of his predecessor?

General **Wickham**. The Department of Defense did not set aside Initiative #17. The Army and Air Force remain jointly committed to implementing this initiative which will transfer the Air Force responsibility for providing rotary-wing lift support for SOF to the Army. The services are now developing an implementation plan based on DEPSECDEF's latest guidance which excludes transfer of Air Force SOF helicopters to the Army. The plan will be briefed to DEPSECDEF on 29 Mar 85.

Mr. Taft received a briefing on all 31 Initiatives and discussed details of Initiative 17 with both Chiefs of Staff and Service Secretaries on Oct. 15, 1984.

As the views of the Chief of Staff had been heard prior to the DEPSECDEF's guidance, his decision was consistent with the Weinberger-Carlucci Initiatives.

LIGHT INFANTRY DIVISION

Senator NUNN. General Wickham, on page 9 of your Posture Statement, you note that the Army has heavy forces primarily for Europe and to a lesser degree for Korea and the Persian Gulf. You note that light forces are required for other contingencies that require rapid strategic deployment and quick response. Do we buy forces for the terrain they will fight in, or for the threat they will face? Why do we have five different types of light divisions? Do we forecast five different types of combat? You indicate in your statement that the new light divisions will require augmenting support from Corps levels to operate in mid-to-high intensity combat situations. Do we have excess Corps level assets that we can spare for this? If the light divisions are sent to NATO in a conventional war, where will the corps assets come from?

General WICKHAM. The Army designs its forces to defeat the potential threat according to the priorities established by the National Command Authority. In particular, the U.S. Army must be prepared to fight and win in combat alongside its allies against any level of attack by the Soviet Union and its Warsaw Pact allies. In general, the Army designs its forces for utility worldwide, adapting them as necessary to fight in particular regions and under particular conditions of combat.

Since the Army has insufficient forces to fight simultaneously in all potential theaters against all potential adversaries, the Army's forces must be prepared to cope successfully with the most likely contingencies such as low-intensity conflict and pre-crisis deterrence operations as well as the less likely but far more demanding high-intensity combat that could result from Soviet attack on NATO.

However, certain regions do have unique characteristics that have led the Army to optimize certain of its forces for combat there, such as the 9th Infantry Division Motorized which is optimized for employment in Southwest Asia and the 6th Infantry Division (Light) which will be provided equipment appropriate for theater defense in Alaska.

In sum, the Army designs its forces based on operational concepts that take into account the threat and the conditions of combat anticipated, while ensuring that the forces can be adapted when necessary to other contingencies.

Each of the Army's light divisions fights according to the principles of AirLand Battle (ALB) doctrine contained in FM 100-5 as well as its own specially designed operational concept. In general, all light divisions attack, defend, conduct retrograde operations, and perform specialized tasks such as operations on urbanized terrain and rear battle. The techniques which each of the light divisions employ to perform the above missions will differ because of differences in light division organizations. For example, the air assault division using organic assets can lift simultaneously most of the dismounted elements of an infantry brigade. Therefore the air assault division can control a greater amount of terrain with its organic transportation assets. On the other hand, the airborne division is the only division capable of establishing an airhead by parachute assault while the motorized infantry division can conduct a mounted deep attack with all of its maneuver battalions during non-flying conditions since units are 100 percent mobile on tracked or wheeled vehicles.

Each of the Army's light divisions will execute ALB doctrine according to the capabilities of that type division. A variety of light divisions provides the US the flexibility to fight and win against a sophisticated threat on any type of terrain and across the spectrum of conflict.

Regarding augmenting support, the Army has sufficient forces to support a light infantry division employed in any regional scenario. During peacetime, the Army retains insufficient support forces for short notice global war. This is an accepted risk which permits adequate combat forces for the national deterrent posture. In the unlikely event of short notice global conflict, support forces would have to be prioritized for the more critical theaters. Light divisions employed in priority theaters would have sufficient support forces, tailored to their requirements. One of our major force initiatives has been to shift assets to Corps level so the Corps Commander can have the flexibility to augment with reinforcing and supporting units as needed. In Europe, this initiative provides additional artillery (both 8 inch and Multiple Launch Rocket System), air defense, attack helicopter, and combat service support battalions to the Corps. The Light Infantry Division can expect to receive necessary support in Europe from these corps assets and also from the theater support base which includes both US Army units and host nation support resources.

Senator **Nunn**. General Wickham, you indicate that the light divisions will provide "more combat power directly to corps commanders as required by AirLand Battle doctrine." I believe that you have created these divisions without adding any manpower and that the rapid deployability of these divisions comes largely by removing their tactical vehicles. How then do we provide more combat power by dividing a fixed pie into more pieces? How will these divisions keep up with the pace of combat anticipated in AirLand Battle without tactical vehicles?

General **Wickham**. At the outset let me point out that the Army in the past few years has created 21 additional combat battalions within the fixed end strength of 781,000. We have done this by restructuring and by substituting technology for manpower thus freeing soldiers for combat units. So we have created more combat power within fixed resources and we will continue this process for the next several years.

Additional combat power is provided through a combination of separate actions. First, because of the rapid deployment capability of light divisions, the Army has the added shock power of a combat force arriving quickly, permitting the commander to influence the battle early. Next, because of the refinements in the design of the heavy divisions, the Corps Commander has other resources available to influence the battle. Our force initiatives add artillery (8 inch and multiple launch rocket system), air defense, attack helicopter, and combat service support battalions to the Corps structure. Additionally, because of the unique capability of the light division to operate in restricted terrain, these forces can secure the flanks of a heavy division within the Corps area, and release the heavy divisions to operate in the open terrain where their mobility and firepower is employed to best advantage. Finally, in the conversion of the 7th and 25th Infantry Divisions to light design and the activation of three new divisions (10th Mountain, 6th and 29th Infantry which is a Reserve Component Division) all tactical vehicles were not removed. There are ground and air vehicles available in the light division to lift a portion of the maneuver elements if required. As a matter of fact, each division will have enough helicopter lift to move the combat elements of an infantry battalion in one sortie and vehicle lift for the combat elements of another infantry battalion. By cycling transport the division can move its forces according to tactical need. Activation of these three new divisions results from shifting functions and resources in the Army and provides additional combat power.

When employed in low intensity conflict these light infantry divisions will not require external augmentation such as trucks and combat vehicles. Light infantry divisions are intended to provide a rapid reaction force before hostilities escalate and are effectively employed as organized.

If employed in other scenarios such as the reinforcement of NATO, the light infantry divisions may require augmentation. This is not a requirement unique to the light infantry divisions since all divisions, heavy as well as light, require combat support and combat service support augmentation. Examples of this echelon above division support are reinforcing artillery, engineers, and transportation units.

Since light infantry units are employed in restricted terrain and are generally given missions to retain that terrain, their transportation requirements for trucks and combat vehicles are minimal. When cross-attached with heavy divisions, light infantry units receive support from the heavy divisions. Therefore, light divisions do not have unique augmentation needs when employed as envisioned by their operational concept.

POMCUS AND WAR RESERVE STOCKS

Senator **Nunn**. General Wickham, you indicated in your statement (page 9) that the Army has increased the fill of wartime equipment stocks in Europe and Korea in order to reduce deployment times and minimize strategic lift requirements. Are our stocks of equipment in Europe sufficient for us to deploy 10 divisions in 10 days consistent with our national stated policy? How large is the shortfall of equipment that is supposed to be in theater but is not there today? If all the storage capacity required to meet the 10 divisions/10 day requirements existed today in Europe, how large would be the shortfall of equipment required to support the 10 division/10 day national strategic requirement?

General **Wickham**. Currently our POMCUS stocks are not sufficient to enable us to deploy 10 divisions in 10 days. The current POMCUS force of [deleted]. There is currently sufficient storage capacity to store approximately [deleted] short tons of equipment. Currently [deleted] short tons are in POMCUS. Approximately [deleted].

AIRLAND BATTLE

Senator **NUNN**. General Wickham, in your statement you say that "AirLand Battle is the doctrinal lever which, combined with qualitatively superior forces, will permit a numerically inferior army to prevail on the battlefield." Last week, the Defense Intelligence Agency provided a briefing in which one of the key conclusions is the Soviet Union is making major strides in qualitatively improvements. Can AirLand Battle work with numerically inferior forces and qualitatively equal ones?

General **WICKHAM**. AirLand Battle is the way we intend to fight, our basic combat method, because it is the best way to defeat a modern, Soviet styled, numerically superior, echeloned force. The doctrine seeks to gain advantage by blending two notions—attacking the entire enemy force to its full depth and synchronizing all available combat means to attain that end. Success is achieved by wresting the initiative from the enemy and exploiting it vigorously to defeat his forces.

To insure unity of effort and success in combat, all three areas of engagement (deep, close-in, and rear) are considered as interrelated parts of one battle. The deep battle must be closely coordinated with the close-in and rear battles. The commander's decision on when and where to attack deep is taken to create a "window" for friendly offensive action in the future. The commander does this by concentrating acquisition means and attack resources on key targets that provide the highest payoff in supporting the commander's scheme of maneuver and upsetting enemy plans.

Even with our older systems, AirLand Battle is a more effective combat method than our previous doctrine. However, the superior systems we are attempting to field will increase significantly our ability to do our job. We need to be able to see the battlefield clearly; interpret, process and distribute the information we gain; then attack with precision those high payoff targets which will allow the commander's plan to succeed. Modern systems such as the Joint Surveillance and Target Attack Radar System (JSTARS), the Joint Tactical Missile System (JTACMS), the Precision Location Strike System (PLSS), and the All-Source Analysis System (ASAS) are essential to this effort and begin to restore our qualitative edge. We also must be able to command and control the battle. For this, modern communications system linking all echelons of command are required. Without these modern systems, the task of winning would be tremendously more difficult.

LIGHT INFANTRY DIVISION

Senator **NUNN**. General Wickham, would you please provide for the record all the R&D and procurement programs in your request that are related to your new light infantry division.

General **WICKHAM**. While no new program starts are identified in the fiscal year 1986 procurement budget specifically for the light infantry division (LID), all equipment items being procured for the LID are common throughout the Army. When the fiscal year 1986 budget was developed, the total procurement requirements for the light infantry division were contained in the Army's overall program. Since the LID is equipped with standard items common throughout the Army, items of equipment such as the HMMWV, 1-81 mortars, and M-16 were not designated as being LID specific.

Research and development items are not designed in advance for a specific unit. Therefore, the Army is unable to state which will be procured for the LID. The British Light Gun, currently being tested, has application in the airborne as well as other infantry units as part of the Army's objective of lightening the force. All items under research and development have numerous applications and are not normally unique to one unit.

LESSONS LEARNED IN GRENADA

Senator **NUNN**. General Wickham, last year I asked you, what were the lessons learned in the Grenada operation. You indicated that you had directed that an indepth study be made that an action plan would be developed to incorporate the lessons learned. Could you summarize for the record the three or four most important lessons from the Grenada experience? What lessons that we learned in Grenada are incorporated in the budget that you have submitted to us today?

General **WICKHAM**. The lessons learned study has been completed and is in its final stages of staffing. I will summarize what I believe to be some of the more significant military lessons resulting from the Grenada experience. Even with extremely limited time available, a complex operational mission, and planning that had to be constrained by operational security in order to save lives, the Joint system produced a highly successful operation. Furthermore, the operation confirmed the value of the high state of physical readiness your Army forces maintain. The Ranger battalions and the 82d Airborne Division performed splendidly. The operation highlighted the need for additional joint training exercises in peacetime to facilitate military operations under combat conditions. The experience certified that current programs are in line with combat requirements. No significant program initiatives or Army budget reprogramming actions resulted from combat operations in Grenada.

READINESS REPORTING INDICATOR

Senator NUNN. General Wickham, a year ago I asked you why the readiness indicators didn't show a significant increase in combat readiness. At that time you indicated that the Army was developing a new readiness reporting device. The current Unit Status Report is a JCS reporting requirement. The goal of the JCS report is to provide comprehensive and systematic reporting across service lines. Have you completed your new readiness reporting technique? Have you formally coordinated this with the Joint Chiefs of Staff? Do they intend to require all the services to adopt this new approach?

General WICKHAM. The Army has not changed its unit status report, but is in the process of refining AR 220-1, "Unit Status Reporting" and is playing a part in the DOD effort to refine status reporting. What we have done, however, as we indicated last year, is to develop an analytical tool to measure changes in unit potential warfighting capability.

The system is the product of two models which were developed concurrently: Analysis of Force Potential (AFP) and Measuring Improved Capability of Army Forces (MICAF). The first model, AFP, provides the numerical factors used in the reporting system. A series of "duels" are conducted by a computer between U.S. units (with actual on hand equipment data) and an opposing Soviet division. Specific equipment item characteristics such as single shot kill probabilities are entered for both forces. The exchanges occur with the units in different combat postures (hasty defense, intense defense, delay and attack) and under differing weather and light conditions. The new AFP Model, unlike past systems, includes the influence of combat support and combat service support when assessing the unit's warfighting potential. It includes a unit's organic short term sustainability.

The model, Measuring Improved Capabilities of Army Forces (MICAF), ties various ADP information systems together to produce the reporting system. MICAF complements rather than replaces the Unit Status Report. MICAF considers the unit's actual on hand equipment assets and the scheduled distribution of new systems in providing a trend line of the unit's changing potential warfighting capability over time. The MICAF model is equipment specific and does not include such intangibles as personnel quality, morale, leadership and training. Unit potential warfighting capability is expressed in terms of percent change.

Relative output of the model shows that the Total Army (24 divisions, both active and reserve) potential warfighting capability has increased 18% from fiscal year 1980 to fiscal year 1984. [Deleted.] Assuming a 2 year funded delivery period for the fiscal year 1986 budget, the model projects a 55% increase in unit potential warfighting capability between fiscal year 1980 and fiscal year 1988.

The Army has proposed that MICAF be briefed to the Secretary of Defense and to the Joint Chiefs of Staff. It is too early to report any intention the Secretary of Defense or the Joint Chiefs of Staff may have in requiring the other services to adopt this or a similar modeling approach for measuring force potential changes.

PRODUCTION RATE EFFICIENCY

Senator NUNN. Secretary Marsh, how many of the major weapons programs (SAR programs) in the Army are being produced at the maximum efficient economic production rate? How many are being produced at the minimum economic production rate? How many are being produced below the minimum efficient economic production rate?

Secretary MARSH. There are no Selected Acquisition Report (SAR) programs being produced at the maximum economic production rate. The majority of them are produced between the maximum and minimum rates at a rate consistent with affordability in a given fiscal year. There is one SAR program (UH-60A Blackhawk) being produced at the minimum economic production rate.

There are, however, two SAR programs (Army Helicopter Improvement Program (AHIP) and Pershing II) being produced below the minimum economic production rate. The Army has just awarded the low rate initial production contract for 16 AHIPs in September 1984. A production go-ahead decision is expected in June 1985 which will begin to ramp production to a more economical rate. Although the Pershing II is being produced below the minimum economic production rate, it is in its last year of production.

ARMY MANPOWER QUALITY

Senator **Nunn**. General Wickham, last year at this time I asked you what the Army's alarm level was with respect to manpower quality over the next decade. Are you able this year to say with some specificity what the Army's future recruit quality requirements are? What level of recruit quality does the Army need to man the new equipment coming into the force over the next decade? What are the prospects for achieving and sustaining this level of recruit quality, especially if the economy improves?

General **Wickham**. Senator Nunn, the Defense Authorization Act of 1985 required all services to report to Congress their enlisted manpower quality requirements in terms of Armed Forces Qualification Test (AFQT) and high school degree status. The Army's analysis in response to this requirement included an examination of the correlation and tradeoff of these two criteria to job performance, completion of enlistment term and cost. One of the fundamental findings that emerged from the study was that the Army's quality measures (AFQT scores and education achievement), are indeed valid predictors of soldier performance. As a result the Army established two accession goals: 90% of its recruits would possess a high school diploma and that they would possess the following mix of AFQT scores:

AFQT category:	*Percent*
I-IIIA	59-63
IIIB	31-27
IV	10

It is appropriate to place the Army's current goals in perspective. The current career force with more than eleven years of service (i.e., the portion of the current force accessed during the draft era) consists of 44.8% AFQT I-IIIA soldiers. The Army's current accession goals (59% I-IIIA) will result in an enlisted force in which 47% of its members with more than eleven years of service would be in AFQT I-IIIA.

This force structure is based upon an assessment by each of its branches (i.e., Infantry, Artillery, Ordnance, etc.) of their force quality requirements considering trainability, job performance, and future structure and system changes. In defining their accession goals the branches focused on the quality requirements of their NCO corps, since the Army must grow its NCO from its accessions. Therefore, the same quality force will meet the Army's need to man the new equipment coming into the force.

The Army's accession quality goals are achievable in the foreseeable future. However, factors such as improving employment rates, inequities in military versus civilian pay, and decreasing size of the youth market will work against us. Our fiscal year 1986 request compensates for these market effects. As we state in our report to Congress on accession quality requirements, this resource increase represents only a very modest increase in overall personnel cost.

NEW GI BILL

Senator **Nunn**. General Wickham, as you know, last year Congress authorized a new across-the-board contributory GI bill for the military service. What is your view about the need for this legislation? Will the across-the-board nature of this bill make the Army's recruiting job harder?

General **Wickham**. Educational incentives are one of the key reasons behind the Army's recruiting success over the last three years. One of the primary influences for the enlistment of high quality applicants has been the Army College Fund. This program provided additional dollar amounts ("kickers") to a soldier's Veterans' Educational Assistance Program (VEAP) account established with the Veterans Administration. The combination of the basic VEAP and the Army College Fund provides an educational assistance account with a value up to $26,400. The new GI bill with authorized kickers (the New Army College Fund) will provide an amount of up to $25,200. The Army is convinced that the new program, with some modification, will be a mainstay of our recruitment effort. To be effective, any educational program used to induce military service must provide a basic level of assistance to all servicemembers. To fulfill the Army's recruiting and retention needs, the Army will continue to require additional educational benefits—above those offered to other services. "Kickers" will continue to be essential, and have been approved by DOD for use with the GI bill. With these, the Army can remain competitive. By and large the new GI bill with the New Army College Fund is a desirable continuation of the previous program.

ANTI-TACTICAL MISSILE (ATM)

Senator NUNN. General Wickham, what is the status of Army efforts to develop an anti-tactical ballistic missile (ATM) capability? Are these efforts separate and distinct from the SDI? Do you have a date by which a decision to deploy an ATBM might be made? What do you consider the most promising ATBM technologies to be? In your judgment, should this effort be conducted within or outside the SDI?

General WICKHAM. The Army has recognized the requirement to develop an Anti-Tactical Missile (ATM) system that will provide the field Army a defensive capability given the current Soviet Tactical Missile Threat. General Gabriel and I have agreed that the Army would be lead service in this development effort and the Air Force will provide support as needed.

The ATM system that we envision will encompass several military disciplines and will require development and implementation of technology to accomplish some new tasks, but should not lead to significant force structure or organizational changes. This ATM system will use counterforce strategies that begin with targeting missile launch and control sites, followed by engagement of those sites and their subsequent destruction. Technological developments include development of targeting mechanisms and associated sensors, development of smart munitions and/or control nodes, development of the "bus" needed to deliver the warhead, and development of battle management techniques needed to effectively control this targeting and engagement procedure. The Joint Tactical Missile System - Army (JTACMS-A) will develop the ballistic "bus" needed to deliver the ATM program developed "smart" munition.

Terminal defense capabilities are a mandatory part of the ATM program, given the U.S. policy of no first strike, if U.S. Air Defense sites and other vital assets are to be protected from preemptive attack. For example, Hawk system upgrades would provide for low altitude cruise missile defense while Patriot upgrades would provide higher altitude tactical missile defense capabilities.

ATM defense is also provided through unit training in terms of active and passive counter measures such as camouflage and site hardening. These procedures are being shared with the other services.

In my judgement ATM efforts should be separate from the Strategic Defense Initiatives (SDI). The ATM program deals with battlefield tactical missile defense while the SDI program relates to strategic defense.

ATM deployment decisions will be made as each element is completed. For example, an ATM sponsored study of the current and expected threat vis-a-vis available systems will be completed by the Army in September 1985. A decision will be made at that time as to the need for any new ATM development efforts.

In summary, air defense and deep attack program technologies appear promising for providing much of the solution to the ATM defense problem.

SHARING MUNITIONS WITH NATO ALLIES

Senator NUNN. General Wickham, could you also explain how we would get ammo from U.S. V and VII Corps all the way up to the Netherlands or Belgian Corps areas? Are existing transportation assets available to do this? How long do you forecast this situation might face us?

General WICKHAM. Information is classified and was furnished to the committee separately.

MANPOWER SUSTAINABILITY

Senator NUNN. General Wickham, for the record please discuss the current status of the Army's supply of pretrained individual manpower available in the event of a mobilization. By occupational category, (i.e. combat arms, medical, css, etc.) show both the demand and supply for pretrained individual manpower available to meet the defense guidance scenario from M-day to M-120.

General WICKHAM. The latest analysis of the demand and supply of pretrained manpower for the fiscal year 1986 Army as provided for in the President's budget shows a substantial improvement over the status a few years ago. However, 90 days after mobilization the Army would have an aggregate shortfall of 116.6 thousand. The following table shows the data in 30-day increments after M-day for officers, enlisted personnel, and aggregate. Each of those categories is subdivided into the occupational categories of combat (CBT); medical (MED); administration, services, and supply skills (LSS), and all others (OTH).

FISCAL YEAR 1986

	M + 30	M + 60	M + 90	M + 120
OFF-TOT:				
AVAIL	233.8	238.2	242.7	249.9
REQ'MT	224.8	232.1	237.6	238.1
FRACT	1.040	1.026	1.021	1.050
BAL	9.0	6.1	5.1	11.8
OFF-CBT:				
AVAIL	73.5	70.5	68.2	68.3
REQ'MT	67.1	67.1	68.0	68.0
FRACT	1.095	1.051	1.003	1.004
BAL	6.4	3.4	0.2	0.3
OFF-MED:				
AVAIL	37.8	39.5	41.4	45.4
REQ'MT	58.3	64.9	68.8	69.3
FRACT	0.648	0.609	0.602	0.655
BAL	−20.5	−25.4	−27.4	−23.9
OFF-LSS:				
AVAIL	42.7	45.4	47.7	49.2
REQ'MT	43.0	43.4	43.7	43.6
FRACT	0.993	1.046	1.092	1.128
BAL	−0.3	2.0	4.0	5.6
OFF-OTH:				
AVAIL	79.8	82.8	85.4	87.0
REQ'MT	56.4	56.7	57.1	57.2
FRACT	1.415	1.460	1.496	1.521
BAL	23.4	26.1	28.3	29.8
ENL-TOT:				
AVAIL	1,296.8	1,265.1	1,246.2	1,279.6
REQ'MT	1,322.5	1,342.0	1,367.9	1,370.0
FRACT	0.981	0.943	0.911	0.934
BAL	−25.7	−76.9	−121.7	−90.4
ENL-CBT:				
AVAIL	366.0	305.8	259.9	255.6
REQ'MT	348.6	348.6	356.6	356.6
FRACT	1.050	0.877	0.729	0.717
BAL	17.4	−42.8	−96.7	−101.0
ENL-MED:				
AVAIL	84.9	87.8	90.3	90.9
REQ'MT	122.4	132.2	138.7	139.4
FRACT	0.694	0.664	0.651	0.652
BAL	−37.5	−44.4	−48.4	−48.5
ENL-LSS:				
AVAIL	372.2	387.5	400.6	415.6
REQ'MT	342.8	344.6	350.1	351.3
FRACT	1.086	1.124	1.144	1.183
BAL	29.4	42.9	50.5	64.3
ENL-OTH:				
AVAIL	473.7	484.0	495.4	517.5
REQ'MT	508.7	516.6	522.5	522.7
FRACT	0.931	0.937	0.948	0.990
BAL	−35.0	−32.6	−27.1	−5.2
AGG-TOT:				
AVAIL	**1,530.6**	**1,503.3**	**1,488.9**	**1,529.5**
REQ'MT	**1,547.3**	**1,574.1**	**1,605.5**	**1,608.1**
FRACT	**0.989**	**0.955**	**0.927**	**0.951**
BAL	**−16.7**	**−70.8**	**−116.6**	**−78.6**

FISCAL YEAR 1986—Continued

	M + 30	M + 60	M + 90	M + 120
AGG-CBT:				
AVAIL	439.5	376.3	328.1	323.9
REQ'MT	415.7	415.7	424.6	424.6
FRACT	1.057	0.905	0.773	0.763
BAL	23.8	−39.4	−96.5	−100.7
AGG-MED:				
AVAIL	122.7	127.3	131.7	136.3
REQ'MT	180.7	197.1	207.5	208.7
FRACT	0.679	0.646	0.635	0.653
BAL	−58.0	−69.8	−75.8	−72.4
AGG-LSS:				
AVAIL	414.9	432.9	448.3	464.8
REQ'MT	385.8	388.0	393.8	394.9
FRACT	1.075	1.116	1.138	1.177
BAL	29.1	44.9	54.5	69.9
AGG-OTH:				
AVAIL	553.5	566.8	580.8	604.5
REQ'MT	565.1	573.3	579.6	579.9
FRACT	0.979	0.989	1.002	1.042
BAL	−11.6	−6.5	1.2	24.6

AVAIL = Supply of manpower available after casualties have been subtracted
REQ'MT = Wartime force structure requirement
FRACT = Fraction of structure that can be filled = AVAIL/REQ'MT
BAL = AVAIL-REQ'MT = shortfall or surplus

SUSTAINABILITY AND REINFORCEMENT

Senator NUNN. General Wickham, on page 11 of your prepared statement, you show a chart entitled sustainability and reinforcement. That chart shows Secondary End Items at almost 50% of requirement at the end of fiscal year 1984. The chart on page 19 of the DOD Report "Improvements in U.S. Warfighting Capability, fiscal year 1980-84" shows Army war reserve secondary items at approximately 15 percent of requirements. Please explain the apparent discrepancy between these two.

General WICKHAM. The chart on page 11 of the prepared "fiscal year 1986 Army Posture Statement reflects the Procurement objective for Army's Prepositioned War Reserves (PPWR), while the chart on page 91 of the DOD Report "Improvements in U.S. Warfighting Capability, fiscal year 1980-84" reflects the Army's total war reserve objectives.

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

PERSONNEL COSTS—BENEFITS DERIVED

Senator LEVIN. General Wickham, there was a discussion at the DOD Posture hearing as to whether personnel costs should be included in comparisons of NATO and Warsaw Pact defense personnel and whether the fact that we pay our military personnel much more than Warsaw Pact nations pay their military personnel means we somehow are receiving less defense payoffs for our use of more dollars for personnel than they spend, thus allowing them to spend more rubles for equipment, R&D and military construction. Do we get anything for our larger spending on personnel in terms of increased military benefits? Does spending enough money for adequate pay and personnel benefits yield us any military benefits? Are there any real military benefits to our spending more on personnel?

General WICKHAM. Our military pay rates were set in 1971 at levels believed necessary to achieve manpower for an All-Volunteer Force. Since that time, experience shows that our highest quality soldiers are more sensitive to pay and unemployment trends. The population from which we obtain our personnel is the same as private industry. Our compensation system must be comparable to the private sector wage system to attract and retain quality personnel. Today we have the best trained and highest educated troops in our history. The cost is high but the retention of high quality personnel in today's modern Army is essential for our national defense.

QUALITY OF U.S. ARMY PERSONNEL

Senator **Levin**. General Wickham, whenever I have asked each of the members of the Joint Chiefs of Staff whether he would trade the overall capabilities and components of his individual service for the overall capabilities and components of its Soviet counterpart, I always am told "No." One of the major reasons for that appears to be that each service so greatly values the much higher quality of U.S. individual personnel to fight harder, think smarter and accomplish the military mission better—compared with the military skills of Soviet personnel in their counterpart service—that none of the chiefs would trade his service for its Soviet opposite number. Would you agree this conclusion is accurate?

General **Wickham**. Senator Levin, I totally agree. As you know, the quality of the Army has improved in recent years. Non-prior service (NPS) Test Score Category I-IIIA accessions increased from 26 percent in fiscal year 1980 to over 63 percent in fiscal year 1984. NPS High School Diploma Graduate accessions increased from 54 percent in fiscal year 1980 to over 90 percent in fiscal year 1984. As the Army mission increases in complexity, the quality of the American soldier will become more apparent. We are seeing an American soldier who is more likely to complete Initial Entry Training and his first term of enlistment. Traditionally, studies have shown that the Soviet soldier's training is limited to specific tasks which he learns by rote with little if any opportunity for initiative. Such training also predictably reduces individual motivation. Our recent experience in Grenada confirms that our soldiers possess the high morale, initiative and key leadership qualities at all levels that we have come to value so much.

MILITARY PERSONNEL COSTS

Senator **Levin**. General Wickham, if so, then wouldn't you say there is a direct military benefit to paying higher personnel costs than do our Soviet/Warsaw Pact rivals?

General **Wickham**. The benefit of higher personnel cost is quality personnel to man the force.

MILITARY PAY COMPARABILITY

Senator **Levin**. General Wickham, would you agree that maintaining military pay scales so they remain comparable with civilian salaries is an essential and key ingredient to maintaining the viability of the All Volunteer Force? Would you agree with the original Gates Commission which recommended the All Volunteer Force cautioned that pay comparability was necessary to make the AVF a success?

General **Wickham**. It is critical that we keep a compensation package that is competitive with the civilian sector. Without competitive pay, retention and quality suffers. We have a competitive disadvantage in the labor market. Our higher test categories are most attuned to pay comparability. The career force will increasingly be composed of lower AFQT-more poorly educated soldiers. The Army faces an increasing recruiting difficulty in the face of an improving economy and declining youth population. Eventual return to pay comparability is the key to the adequate recruitment and retention of highly qualified soldiers in all skills.

Senator **Levin**. General Wickham, Pay Comparability today is measured, by law, by comparing military wages with what is known as the Professional, Administrative, Technical and Clerical Index—or PATC ("Patsy"). Under the President's pay proposals in this budget, are you aware that the military pay will be further behind the comparability standard—13.4 percent—than at any time in the last 11 years? Were you aware that according to a comparison with the Employment Cost Index, which some prefer to the PATC standard, military pay in this budget still will be further behind civilian pay—9.6 percent—than at any time in the last 11 years? (These figures were provided by the Office of theAssistant Secretary of Defense for Manpower, Dr. Larry Korb)

General **Wickham**. We assume rough pay comparability was regained October 1, 1981 with the 14.3% targeted pay adjustment. Pay adjustments over the past 3 years and the three month's delay in fiscal year 1984 and fiscal year 1985 implementation have again created a military package comparable to the civilian labor market. Given the present budget deficit, full restoration of comparability is probably not possible in one year. We need to meet private sector wage growth and plan pay adjustments over the next 4 years to restore comparability.

Senator **Levin**. General Wickham, how much more have to be added to the fiscal year 1986 budget request to restore comparability to military pay, measured by the PATC and by the Employment Cost Index?

General **Wickham**. The fiscal year 1986 President's budget includes resources of $.81 billion required for the proposed 3% pay increase July 1, 1985. To achieve pay comparability the following additional resources will be required:

To restore comparability to ECI as reported by OSD (9.6%)—$2.59 billion ($1.74 billion for pay raise, $.85 billion for retired pay accrual);

To restore comparability to PATC as reported by OSD (13.4%)—$3.62 billion (2.43 billion for pay raise, $1.19 billion for retired pay accrual); and

To restore comparability to ECI as reported by Army (6.6%)—$1.78 billion ($1.19 billion for pay raise, $.59 billion for retired pay accrual).

Senator **Levin**. General Wickham, isn't the Army, the most manpower intensive service and the one which traditionally has the most difficult time recruiting and retaining adequate numbers of personnel of sufficient quality, the armed service likely to suffer the most by a lack of pay comparability?

General **Wickham**. Your observation regarding the Army's manpower and the impact of pay comparability is accurate. However, with the assistance of Congress we have achieved the highest quality enlisted first term force in recent history. The retention of these soldiers (who will be the NCO corp of the 1990's) is important in terms of recruitment, retention, readiness and modernization of the force. Eventual return to pay comparability with the private sector is the key to the adequate recruitment and retention of highly qualified soldiers in all skills. Experience has shown that our highest quality soldiers are more sensitive to pay comparability and civilian employment opportunities. Even with the proposed 3% pay adjustment July 1, 1985, economic analysis projects a loss of 3,000 career force soldiers and 1,500 accessions—mostly among our higher quality soldiers. A fiscal year 1986 pay freeze will increase these losses to 6,100 career force soldiers and 3,000 accessions. While attainment of pay comparability may take some time, it is critical to keep the force at authorized levels in critical skills. The aggressive use of special and incentive pays, such as reenlistment bonuses, is key to maintain critical skill manning at acceptable levels.

CHEMICAL WEAPONS

Senator **Levin**. General Wickham, the Army is seeking funds to begin production of binary artillery shells. Yesterday we heard that General Vessey's European counterparts, as members of NATO's Military Committee, support modernization of our chemical retaliatory deterrent with binary weapons. If this is so, why do you think no NATO government has agreed that we could forward deploy these new weapons in Europe, where their value as a deterrent as well as in retaliation, would be greater than if they were stored in the United States?

General **Wickham**. Our NATO allies have not been asked to accept binary munitions forward deployed in Europe. Our first and untmost concern in the chemical stockpile modernization program is to re-establish a credible chemical deterrent. If funding authority is given this year to start initial production of binary chemical munitions, it will still be a number of years before we will be able to replace the old obsolete stockpile with binary munitions. With some 15 or more nations now having an offensive chemical warfare capability, it will be more militarily prudent to retain the initial stocks of binary munitions in the United States to meet worldwide United States requirements. If a situation should require us to do so, the new binary munitions (as they become available) can be put safely aboard ships that are in fact forward deployed. The whole concept of binary munition safety for handling and transportation will allow us to deploy them more quickly than the current stockpiled munitions.

NATO has established a policy that calls for the maintenance of an effective capability to retaliate with chemical weapons in kind. The West German government in its 1983 Defense White Paper has indicated support of U.S. stockpile modernization. So although our European allies have not been asked to accept binary munitions, many officials have privately supported the U.S. binary program and are relying on the United States to provide NATO an effective chemical retaliatory capability.

Senator **Levin**. General Wickham, the National Guard has now become interested in binary production, as well as in improving its overall chemical warfare posture. Would you agree that the defensive capabilities of our Active Forces significantly exceed those of our National Guard Forces?

General **Wickham**. Our goal is to equip our total force with the best available chemical defensive equipment research, development and acquisition programs since 1980. Thus far we have been able to insure that all elements of the Army have basic chemical protective gear. Our forward deployed and early deploying forces have full issue of chemical protective gear for training and readiness and the later deploying forces and support elements should be equipped with individual protective gear by fiscal year 1987. Our goal for unit level decontamination, detection and warning equipment is to complete initial issue for those forces by fiscal year 1991-92.

We will still have some serious deficiencies across the total force because technology has not yielded good solutions to some key problems encountered on the chemical battlefield—devices for chemical agent reconnaissance, detection and identification; heat stress burden of the protective gear; battlefield collective protection, and logistically supportable decontamination systems. Even when these problems are solved, our forces will be at a serious disadvantage if we must operate under the threat of one sided use of chemical weapons. If our opponent uses chemical weapons, and we cannot retaliate in kind, then we lose 30-50% of our fighting effectiveness and the opponent will not. The present out of balance situation with regard to chemical weapons is of critical concern to our Guard and Reserve commanders because 50% of our chemical warfare defense capability is in their units. These citizen soldiers will be called upon to do much of our chemical reconnaissance and decontamination work on the chemical battlefield. They know what it means if we fail to deter our opponent's use of chemical weapons.

Senator LEVIN. General Wickham, how much more could be spent productively in fiscal year 1986 to improve National Guard chemical warfare defensive capabilities. Provide detailed information by specific program.

General WICKHAM. Funding for the Army National Guard (ARNG) chemical warfare defensive capabilities is appropriated by Congress in the Operations and Maintenance, National Guard (OMNG) and Other Procurement Army (OPA) appropriations. The fiscal year 1986 President's Budget will permit the ARNG to achieve significant improvements in chemical defense equipment. All personnel in early deploying units (D to D+60) will be equipped with one individual protective equipment set for contingency and one set for training. As new contingency sets are received, other sets will be released to the later deploying units for training. The ARNG inventory of individual protective equipment will be raised from 40% to 71% of requirements with fiscal year 1986 funding. Although there currently is a $30 million shortfall, the ARNG force should be fully equipped with individual protective equipment in fiscal year 1987.

In the OPA area, the ARNG has a shortage in contamination avoidance equipment such as chemical alarms, for which a 60% shortage ($18 million) exists, and radiacmeters, for which a 60% shortage ($4 million) exists. These shortages are Army-wide and procurement is in process. Early deploying ARNG units are scheduled to receive the OPA funded equipment at the same time as the Active Army.

READINESS AND SUSTAINABILITY

Senator LEVIN. General Wickham, even though war reserve requirements have been funded at expanding rates since fiscal year 1980 there is still a considerable gap between what is on hand and in the procurement pipeline compared with total requirements. How sustainable is the force in a protracted, multi-theater conventional conflict? Please identify your most critical deficiencies in each theater and identify those which could begin to be better redressed by additional funds in 1986?

General WICKHAM. In aggregate estimated days of supply, current assets vs. theater stockage objectives as of Dec. 31, 1984 are:

	Europe	SWA	Korea (United States)
Major items		[Deleted]	
Secondary items			
Ammunition			

MATERIEL SUSTAINABILITY

Senator LEVIN. General Wickham, the material sustainability of our forces is largely described and reported on the basis of theater by theater war reserve fill rates. These reports demonstrate significant shortfalls in stock levels that raise serious questions as to how long we can sustain relative to our ability to move CONUS stocks to the theater and to the point industrial base production capacity is sufficient to meet war time consumption and loss requirements. Considering the potential to move theater prepositioned stocks from one theater to another, how long can we sustain on a theater-by-theater basis?

General **Wickham**. Three major theaters—Europe, Southwest Asia and Northeast Asia—constitute the basis of our wartime scenarios due to the potential for outbreak of hostilities. War reserve requirements are computed on the basis of multi-theater combat operations occurring as stipulated in a DOD-wide illustrative planning scenario. Sustainability estimates for "single theater wars" equate to estimates for the multiple conflict scenario as materiel located in a theater would remain in the theater to maintain warfighting capability (a deterrent to initiation of hostilities). In the event of the execution of a contingency plan and on a case-by-case basis, selected items may be moved from a theater to the point of need. Current aggregate sustainability projections (assets vs. stockage objectives) in days of supply for the major theaters are:

	Europe	SWA	Korea (United States)
Major items		[Deleted]	
Secondary items			
Ammunition			

Senator **Levin**. General Wickham, are U.S. war reserves intended solely for U.S. force consumption? Do current operation plans anticipate that certain types of sustainability stocks will be provided by our allies? How have these considerations been built into budget requirements? What effect do these anticipated drawdowns or additions to war reserves have on reported sustainability? Are U.S. taxpayers spending their money to buy ammunition and other supplies to be given to our NATO allies in a war if needed, because our allies are unwilling to spend their own tax dollars for them?

General **Wickham**. U.S. war reserves are intended for use by U.S. forces, except for WRSA, or War Reserve Stocks, Allies (U.S.-owned materiel held in Korea for use by Republic of Korea forces, a complementing additive to ROK war reserve stocks).

With the exception of WRSA, our current operational plans assume all allies, to include the U.S., will sustain their respective forces. There are contingency provisions in NATO for limited reallocation of national stocks (rations, POL and conventional munitions) for an emergency in war.

Excluding WRSA, our budget requirements reflect support for U.S. forces only. We conform to the provisions of H.R. 5580 which prohibits increasing U.S. inventory levels solely to carry out the terms of any cross-servicing agreement. U.S. materiel contributions to WRSA are resourced primarily by enabling legislation under the provisions of Section 514 of the Foreign Assistance Act and minimally by appropriated funds. Such contributions are based on shortfalls remaining after available and projected ROK assets are considered.

There is no improvement in or degradation of reported war reserve sustainability due to additions or drawdowns in support of allies.

U.S. taxpayer dollars are not being spent to buy war reserve for improvements in allied sustainability in NATO. A basic tenet of the NATO alliance is that logistics support is a national responsibility.

DEPOT MAINTENANCE

Senator **Levin**. General Wickham, DOD's goal is to reduce depot maintenance backlogs to zero. As additional equipment is added to the inventory in ever increasing quantities throughout the 1980s, by how much will depot maintenance budgets have to be increased to accommodate the goal? Why aren't sufficient funds contained in the fiscal year 1986-90 defense program to reach that objective? Provide yearly totals. If depot maintenance budgets cannot be increased to meet the goal, how will force readiness be affected—by major equipment categories?

General **Wickham**. Our last formal assessment regarding the Depot Maintenance Program revealed the following:

[In millions of dollars]

	Fiscal year—				
	1986	1987	1988	1989	1990
Unfinanced requirements:					
Materiel maintenance	11	157	169	142	42
Maintenance support	230	228	235	179	40
Total	241	385	404	321	82

However, this data is one year old and we are just now looking at updated requirements for programming fiscal year 1987-fiscal year 1991. Although the numbers are still being scrubbed, we do not expect them to change significantly.

The funding level for fiscal year 1986 results in an $11 million backlog for materiel maintenance and $230 million for maintenance support. For the remaining program years, the program remains in balance and will not hamper key readiness issues.

We do not expect an adverse impact on force readiness for the outyears because we will fund: repair of secondary items, which enhances near-term readiness; modifications and conversions, which extend the life and enhance the capabilities of existing systems; and all overhaul and repair of force modernization systems.

FORCE STRUCTURE

Senator LEVIN. General Wickham, the Army force structure has undergone considerable change recently and significant change is anticipated in the future. However, the Army's end strength is remaining fairly constant at about 780,000. Another factor that must be considered in force structure decisions is the ability to employ the force for its designed purpose; however, strategic lift capability is still far short of requirements. Between 1976 and 1980 the Army studied the balance between the modernized weapons it expected to field, the tactics and doctrine that are needed to win on the modern battle field and the support required to make it all work. The result of these studies was a heavy division comprised of more than 19,000 personnel. In 1984 the decision was made to reduce the requirement to approximately 16,000 troops per division; did this decision reflect a reassessment of the optimal size of the heavy division structure or was it an accommodation to deal with force structure manpower constraints? For example, was this decision made to accommodate the manpower requirements of the new light divisions without increasing total end strength requirements? What risks to the effectiveness of the heavy divisions are being taken with the lowered strength, and what adjustments to doctrine and tactics are being made to minimize such risk?

General WICKHAM. In 1983 the U.S. Army reviewed its ability to perform likely missions across the spectrum of conflict and to implement its recently published AirLand Battle doctrine. The review indicated a need to be able to rapidly reinforce forward deployed U.S. forces and to be able to deploy rapidly to contingencies elsewhere. To better accomplish these tasks, the Army undertook a review of its total force structure. The result was a decision to streamline the heavy divisions, provide the corps commander with increased flexibility for warfighting, and to form the light infantry division.

Streamlining the heavy divisions improved corps and division operational effectiveness by optimizing organizational designs to incorporate modern equipment and to efficiently utilize vital but limited resources. Efficiency in the use of assets eliminated from the division was achieved by consolidation of most of those assets at echelons above division. For example, 8 inch artillery and Chaparral air defense weapons were placed under control of the corps commander who has an operational perspective of the battle. The force structure initiatives at division have resulted in additional multiple launch rocket system (MLRS) and attack helicopter assets at corps also. The corps commander can use these scarce resources to influence the battle under corps control or in support of a division based upon his assessment of the situation. These force design initiatives are in accordance with Army doctrine.

The Army added light infantry divisions to its structure in order to give a new dimension to the strategic mobility of Army forces. The light infantry division was designed primarily for application in low intensity conflicts but with utility for mid to high intensity combat. In low intensity conflict, light infantry forces are a potent deterrent because they can be deployed rapidly to provide a national response at the lowest possible level and limit the risk of escalation. In mid to high intensity conflict scenarios, light forces contribute to deterrence by rapidly reinforcing forward deployed units and by enhancing the overall force's capabilities through more effective task organization.

The Army will form its five light divisions while maintaining a constant end strength of approximately 781,000 active component personnel. Of the five light infantry divisions, only the 10th Mountain Division will be a completely new activation. The 7th, 25th, and 29th Infantry Divisions will be formed by conversions of existing units and the 6th Infantry Division will incorporate the 172d Infantry Brigade in Alaska. The 29th Infantry Division is in the Army National Guard and the 6th and the 10th Infantry Divisions will each have a reserve component brigade. The refinement of the heavy division design, the new light forces designs, and the ongoing redesign of corps and other units above division level are resulting in a properly structured, balanced force, capable of responding across the entire spectrum of conflict.

M1 TANK

Senator **LEVIN**. General Wickham, is the M1 tank still a top procurement priority for the Army?

General **WICKHAM**. The M1 tank still remains the Army's top procurement priority.

Senator **LEVIN**. General Wickham, do the force structure changes and modification to the unit structures of the Army currently underway—including creation of the light divisions and changes to the Division 86 structure—alter the Army's requirements to modernize its heavy units? Has the Army adjusted any of its procurement programs to reflect these changes? In the case of the M1, do these changes require any alteration in the total planned procurement program? If not, why?

General **WICKHAM**. Army force structure changes and modifications to unit structures have in no way altered the Army's requirement to modernize its heavy units. The Army has not adjusted any of its procurement programs as a result of force structure changes. Planned procurement for the M1 series tank remains 7,467 units. The number of tanks in an M1 tank battalion remains the same with the same number of active and reserve component tank battalions requiring the M1 tank.

Senator **LEVIN**. General Wickham, the performance of the M1 in the annual large scale NATO combat exercise—Reforger—in the past two years has been excellent. Reforger '84 has just concluded, and we have received preliminary information that the M1 continued its fine performance record. Please provide detailed information for the record as to how the M1 performed in Reforger '84.

General **WICKHAM**. 333 M1 tanks participated in Reforger '84 and maintained a readiness rate of 96.7% for the duration of the exercise. These tanks averaged 331 miles of use for Reforger. 108 of the tanks were drawn from Prepositioned Overseas Materiel Configured in Unit Sets (POMCUS) by a deploying FORSCOM brigade and 225 belonged to USAREUR based participating units.

Senator **LEVIN**. General Wickham, M1 tank crews also reportedly performed well in a major NATO tank gunnery exercise known as the Canadian Army Trophy. Please provide details for the record.

General **WICKHAM**. The Canadian Army Trophy tank competition has been conducted biannually since 1963 at tank ranges in the Federal Republic of Germany. The 1983 competition, the most recent event, was hosted by the Canadian Army at Bergen, West Germany, from June 20-24, 1983.

The 1983 competition had a significant change in that Army Groups within the Central European Command competed against each other. New rules were designed to overcome past practices in which the original aims of the competitors were distorted into nation versus nation or tank versus tank. The 1983 competition had no national or tank type winner.

No awards were given to companies in an attempt to lessen tank or nation comparisons. However, had company awards been given, the United States would have swept overall high, Central Army Group (CENTAG) high and Northern Army Group (NORTHAG) high. The Germans won honors in the platoon level competition.

Results were as follows:

Army group winner—CENTAG.

Platoon winner—GE 293d Tank Bn.—2d and 3d overall—U.S. 3d Bn-64th AR (M1 tanks).

Company results (not a competitive category in 1983)—High overall—U.S. 3d Bn-64th AR (M1 tanks); High CENTAG—U.S. 3d Bn-64th AR (M1 tanks); and, High NORTHAG—U.S. 2d Bn-66th AR (M60A1).

Senator **Levin**. General Wickham, some consideration is being given to initiating a 4-year, multi-procurement contract for the main body of the M1, along with already proposed multiyear contracts for the M1 engine and fire control system. Initial reports are that a multiyear contract for the main M1 chassis could save significant sums of money. Is the Army seriously considering such a multiyear proposal, and what fiscal and military benefits would result? Please provide details for the record.

General **Wickham**. The Army is considering initiating a four-year multiyear procurement contract of the M1 chassis. Estimates are this multiyear contract will save $393 million when compared to the present process of negotiating single year contracts on an annual basis. If, in addition to the chassis, the engine and fire control are approved for multiyear contracts, the total budget savings are over $600 million during the next 4 years.

BRADLEY FIGHTING VEHICLE

Senator **Levin**. General Wickham, questions continue to be raised about the survivability of the Bradley Fighting Vehicle. The Army has plans to increase its survivability, but those improvements reportedly will not be introduced into the vehicles for several more years. What survivability enhancements is the Army planning to incorporate in the Bradley and when will they be installed? If installation will not begin for several more years, what accounts for this delay? Can the schedule for implementation of these improvements be accelerated, and how much would it cost to accelerate that by one year: By two years?

General **Wickham**. The Army's plans to increase the survivability of the Bradley are being accomplished by increasing the level of armor protection and by using interior stowage and protective techniques which will decrease the probability of catastrophic damage if a penetration occurs. Current plans are to incorporate these changes into the fiscal year 1989 procurement program High payoff individual changes which are identified as beneficial from the Ballistic Research Laboratory Bradley survivability shooting will be cut into production at the earliest possible date.

Acceleration of this program is not recommended. The program as laid out will insure that changes to BFVS will do the job, be cost effective, and not degrade current performance. Adherence to this schedule depends on full funding for the development effort.

Senator **Goldwater**. The meeting is adjourned.

[Whereupon, at 11:51 a.m., the committee was adjourned, subject to the call of the Chair.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1986

WEDNESDAY, FEBRUARY 6, 1985

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

NAVY/MARINE CORPS PROGRAMS

The committee met in open session, pursuant to notice, at 9 a.m., in room SR-253, Russell Senate Office Building, Senator Barry Goldwater (chairman) presiding.

Present: Senators Goldwater, Thurmond, Warner, Humphrey, Cohen, Wilson, Denton, Nunn, Kennedy, Bingaman, Dixon, and Gramm.

Staff present: James F. McGovern, staff director and chief counsel; Arnold I. Punaro, staff director for the minority; Alan B. Yuspeh, general counsel; Christine C. Dauth, chief clerk; Patrick A. Tucker, counsel; Robert F. Bott, George K. Johnson, Jr., Douglas Graham, David S. Lyles, Mark B. Robinson, Carl M. Smith, John J. Hamre, Gordon G. Riggle, and Ronald P. Kelly, professional staff members; Gerald D. Strickler, printing and documents clerk; Russell Miller, research assistant; and Kathleen L. McGuire, staff assistant.

Also present: Gerald J. Smith, assistant to Senator Goldwater; Les Brownlee, assistant to Senator Warner; James H. Dykstra, assistant to Senator Cohen; Bernard R. Toon and Karl H. Stegenga, assistants to Senator Quayle; John Roddy, assistant to Senator East; Mark J. Albrecht, assistant to Senator Wilson; Alan Cameron, assistant to Senator Denton; John Rasmussen, assistant to Senator Gramm; Francis J. Sullivan, assistant to Senator Stennis; Jeffrey B. Subko, assistant to Senator Exon; Peter D. Lennon, assistant to Senator Levin; James Steinberg, assistant to Senator Kennedy; Edward McGaffigan, Jr., assistant to Senator Bingaman; and Charles C. Smith, assistant to Senator Dixon.

OPENING STATEMENT BY SENATOR BARRY GOLDWATER, CHAIRMAN

Chairman GOLDWATER. The meeting will come to order.

Before I start my prepared remarks, I would like to say, as a person who served in the military and as one who receives a retirement benefit, that frankly I do not think I deserve, because I was a reservist—and I never believed that the reservists should be given the same treatment as regulars—I have found Mr. Stockman's remarks yesterday about as distasteful as anything I have heard coming out of this administration or any one preceding it.

There is no question that retirement and compensation deserve some oversight. But I can remember when I went in the service. Retirement was a silver rung at the top of the ladder and if you kept your nose clean and did not get in trouble, then when you left the service you were entitled to retirement.

I might suggest to Mr. Stockman that he look around. I have tried to add up all that I have ever paid into Social Security, and I started when Franklin Roosevelt first dreamed it up. At $4 a month, I do not think I have paid $10,000 into Social Security. Do you know how much I could get if I want to collect? $9,000 a year.

I suggest that Mr. Stockman get his calculator and his slide rule and start looking someplace else. I am going to have some more to say on this at a later time.

This morning's Navy hearing is the third of our committee's military posture hearings. Today we are pleased to welcome the Secretary of the Navy, John Lehman Jr., Adm. James V. Watkins, Chief of Naval Operations; and Gen. Paul Kelley, the Commandant of the Marine Corps.

During this past year, the Navy and Marine Corps team has continued to serve our Nation's interests and those of our free world allies around the world, from the Arabian Gulf to the Caribbean Sea. We all have cause to be proud of the professional fashion in which the U.S. sailors and marines have performed their duties, often under arduous conditions.

The Navy and Marine Corps together provide military capabilities which span virtually the entire spectrum of defense missions—strategic deterrence, conventional warfare at sea, air and land warfare, and special forces operations. In this regard, as Secretary Lehman begins his second term of office, I want to congratulate him on the central role he has played in restoring the United States to a position of maritime superiority.

Mr. Secretary, I think your successes in fostering competition and in the procurement process are especially praiseworthy. The savings you have effected are substantial and I hope will serve as an example to others of what can be done through drive and perseverence.

Since my visit to Oceania, VA, which I have to tell you again was most revealing, I have been extolling the virtues of the Navy system to the other services. Even though they are embarked on such processes, I think the Navy is quite a bit ahead.

Let me extend my congratulations to Admiral Watkins and General Kelley as well. Your leadership and vision have been essential to our naval restoration program. Through your efforts, in concert with those of the unified commanders, increased funding has been translated into higher readiness ratings in every combat category. Moreover, a deteriorating personnel situation has been dramatically reversed and today sailors and marines are the best we have had in decades.

Additionally, your enhanced cooperation within the Navy-Marine Corps team and with the Army and Air Force as well have been very gratifying.

Senator Nunn will be along, and he can put his statement either in the record or make it personally. All of your posture statements have been made available to the members and I understand that all three of you would like to put them in the record. If you care to summarize, that is fine, and then we would like to spend the rest of the time asking you some questions.

So, Mr. Secretary, it is all yours.

STATEMENT OF HON. JOHN F. LEHMAN, JR., SECRETARY OF THE NAVY

Secretary LEHMAN. Thank you, Mr. Chairman, for those kind remarks, for which we thank you. I am almost tempted to yield the rest of my time to you, but I would like to give a short summary of my written testimony to just touch on some of the major themes.

Four years ago, almost to the day, we put before this committee a seven-point plan to restore the strength of our Navy and Marine Corps. That plan had seven simple principles that were going to guide us in pursuing that recovery.

The first was to restore a coherent, straightforward strategy to underpin everything else that we did in our planning, budgeting, and programming.

The second was to reestablish the health of our personnel programs, which in the Navy were in dire need of assistance. We were at the lowest point in terms of retention and recruiting since we have been keeping records, 209 years, and that was our top priority in terms of spending money and emphasis.

The next was readiness, to restore the readiness that had fallen in the case of some of our most advance carrier aircraft down to about 30 percent mission-capable; again, some of the lowest readiness figures we have ever had in peacetime.

The fourth was to modernize the sea-based leg of our nuclear deterrent.

The fifth was to completely reorganize our shipbuilding program, not only to double the numbers of ships that we were building and to act immediately to save the disappearing shipbuilding and repair industry in the country, but also to completely change the method of doing business with our shipbuilders and ship repair industry.

The sixth was to end the 8 straight years of not buying sufficient aircraft to even replace the number lost in peacetime training.

The last was to restore the weapons and ammunition stocks that had fallen to a point where we could not even load out the fleet once, a fleet that had been cut in half during the seventies. We could not fill the magazines even once 4 years ago.

So in my testimony today and in my report on the posture of the Navy and the Marine Corps, I am happy to report that we are still exactly on course. We are where we said we would be 4 years ago. We have made tremendous additions to the capability of the Navy and the Marine Corps in every measurable dimension and also in the intangibles of morale, esprit, and overall health.

In personnel, you are well familiar with the revolutionary turnaround in retention, recruiting, and quality—above all, quality. We have the best quality we have ever had. As you yourself have seen out in the fleet, the kids out there today whom we are attracting to military service have never been equaled in war or peace, and as far as I am concerned, in terms of quality and commitment to the country. They are not there because they cannot find jobs; they are there because they have a sense of mission and a sense of adventure in going into the Navy and Marine Corps.

In terms of readiness, we have seen the most exciting turnaround in the readiness of our forces at every level. We have a 30-percent increase in the readiness of our ships. We have a more than 40-percent increase in the readiness of our aircraft squadrons. We have, by every single statistical measure, a tremendous improvement in capability of the force in being. That is because we have trebled the amount of money going into spare parts and maintenance from the program we inherited 4 years ago.

In shipbuilding, we have indeed kept our pledge to double the shipbuilding rate. We have saved the industry, although not as much as the Nation needs, in my judgment. We now account for more than 80 percent of the employment in the entire shipbuilding and repair industry in this country.

We are building, now, the highest number of ships since World War II. We have 103 ships under construction and we are building them in 21 different yards dispersed around the country. We have added nearly 60 ships to the fleet since 4 years ago.

We have added real strength quickly by continuing deliveries from the Nixon, Ford, and Carter programs, stopping plans we inherited to retire ships like the *Coral Sea* and the *Midway,* and the DDG-2 and the DDG-37 class—overhauling and modernizing them instead—and building on the expanded base with our new programs. So in 4 years we have had a tremendous increase in ships, 60 ships, in a very short period of time.

In fact, in 4 years we have increased by 20 percent the surface combatant ship days available to the fleet by a combination of adding numbers, increasing time between overhauls, and getting more ships out on time, ahead of schedule, and with the fleet. We have increased the available submarine days to the fleet, adding to both conventional and nuclear deterrence, by more than 40 percent in those 4 years.

So the record is one we are proud of. It has been a very real and substantial increase in capability in a short period of time. We have done this with an average 7 percent real growth in the Navy's program over 4 years. Yet, in my judgment, with only 7 percent real growth, we have gotten around 100 percent real increase in warfighting capability and maritime capability in support of all of the military missions of the country—one of the best bargains, I think, that the taxpayers have ever seen in such a short period of time.

A major element of this accomplishment was the tremendous change in the way we do business in the Pentagon. One of the saddest things that I have seen in my time, in 16 years in Washington, is the failure of the press to accurately treat the transformation of defense procurement that Cap Weinberger has brought about. He ended the 20 years of overcentralization and bureaucratization of the procurement process imposed in the name of reform. This so-called reform drove competition in our spare parts down to 6.9 percent, took 65 percent of end items away from the services—including claw hammers, toilet seats, and diodes—and turned them over to a centralized bureaucracy in the name of reform. That has all been reversed. We still have a long way to go, but Secretary Weinberger has set the direction and put accountability back into the system.

As a result, we have raised the number of our contracts awarded competitively from 6.9 percent to 50 percent in the Navy. We have accomplished 3 straight years of underruns, Mr. Chairman, not overruns, with a cumulative savings of $2.4 billion.

So it is particularly galling to those of us in the Pentagon who are trying to get recognition to those unsung people down in the bureaucracy committed to bringing this about, when we see the kind of grandstanding from the amateurs in subcommittees and elsewhere up here who have no jurisdiction and who have no knowledge of the complexity of defense, destroying the perception of the American people of what is really happening in defense.

I think democracy depends absolutely on an accurate perception of what is really going on here in Congress. People who pander to the headlines with things like toilet seats, that were discovered by the very reforms that Cap Weinberger put in, brought to the attention of the bureaucracy and then competed, do a grave disservice to the whole legislative process and to the American people.

The American people should be proud of what has been brought about. We have the most vast system of procurement in the world. We buy everything of every kind. In the Navy alone, we have 2.3 million inventory items, and for anyone to generalize about what the simple solution to that is, is silly.

So I applaud the seriousness with which this committee has addressed procurement and the changes that need to be made. Much more needs to be done, but Cap Weinberger has set the direction of restoring accountability, of cutting back on bureaucracy, of bringing competition and second-sourcing back into the way we do business, and I hope you will support him, that you will applaud him, and encourage the direction he has set, and continue it.

Thank you Mr. Chairman.

[The prepared statement of Secretary Lehman follows:]

REPORT BY HON. JOHN F. LEHMAN, JR., SECRETARY OF THE NAVY

Mr. Chairman, I welcome this opportunity to appear for the fifth time to offer my assessment of the current posture of the Navy/Marine Corps team and to present the Department of the Navy Budget for Fiscal Year 1986.

As you review the result of President Reagan's naval recovery program of the last four years and begin the process of making decisions to guide its continuation for the next four years, I urge you to keep one principle paramount—accountability. Our democratic processes cannot succeed over time unless congressional actions are based on an accurate perception of facts, a clear understanding of cause and effect, and a recognition of which actions have succeeded and which have failed. Your task is doubly difficult because so much misinformation has poured into the public and congressional debate on the issue of the defense build-up of the last four years. In the post-war period, I doubt if there has ever been an issue treated in the media with such careless inattention to fact, or one addressed by so many amateurs purporting to speak with authority.

You may be sure that we in the Navy and Marine Corps will work with you to establish the true facts, to uncover the real chains of causality, and to understand which actions deserve your praise and encouragement and which your censure. At the end of the legislative process, I am confident you will take great pride in your partnership with the Department of the Navy and in the satisfaction that the 7 percent average annual real growth in resources that you have provided to us over the past 4 years has already accomplished significantly more than 7 percent growth in real capability, in quality, and in increased security. In my judgment, because of the unbelievable human quality, morale improvements, readiness and modernization improvements, and an increase in weapons systems capability, we have doubled our naval capabilities over the past 4 years.

PROGRESS REPORT

This committee well knows that it was only 5 years ago that the Chief of Naval Operations testified to Congress that the United States Navy no longer enjoyed superiority at sea. He expressed the imbalance between our naval capability and the missions required by national policy concisely: "We are trying to meet a three ocean requirement with a one-and-a-half-ocean Navy."

Four years ago this Administration submitted a naval recovery program that has guided our actions ever since. The program was based on President Reagan's commitment that, as he put it, "Maritime Superiority is for us a necessity." This necessity is but one component of our national defense strategy. Nevertheless, it is a fundamental requirement necessary for the success of any national strategy. The growth of the Soviet fleet into a global blue water navy, a navy whose active deployments are now visible in our newspapers virtually every week, has meant that no coalition defense based on our global alliances could be executed without the rapid adoption of a different naval strategy and a larger fleet to carry it out. The program put forward four years ago to achieve this was simple and well defined. It was built upon seven elements:

First, a more realistic strategy for the use of Navy/Marine Corps forces to maximize their deterrence in peacetime, and to prevail if deterrence fails.

Second, the restoration of the quality, training, and morale of our personnel.

Third, the restoration of the readiness of the Navy and Marine Corps through adequate maintenance, repair, spare parts, and support.

Fourth, the modernization of our sea-based nuclear deterrent, the most survivable and enduring component of the U.S. strategic triad.

Fifth, the establishment of a shipbuilding, reactivation, and conversion program to increase the force with the right kinds of ships and to save an industrial base on the verge of collapse.

Sixth, to establish an aircraft modernization and procurement program to restore aircraft numbers and quality to meet operational requirements.

Seventh, to build up stocks of ammunition and missiles to realistic objectives for sustaining combat.

I am pleased to report that our objectives remain exactly the same today as originally outlined four years ago and that the Navy and the Marine Corps are on course and on schedule in achieving them. In fact we are considerably further along than is generally recognized. Taking each of the seven elements in turn:

Strategy

Our maritime strategy is simple and straightforward because the tasks demanded of our naval forces are simple and straightforward:

First, to prevent the seas from becoming a hostile medium of attack against the United States and its allies.

Second, to ensure that we have unimpeded use of our ocean life lines to our allies, our forward deployed forces in peace and war, our energy and mineral resources, and our trading partners; to be able to project force from the seas in support of our national security objectives short of war; and to be able to bring force to bear directly in support of combat ashore, should deterrence fail.

The global maritime strategy set forward four years ago has been continuously refined and applied to training. It is a coherent and flexible strategy designed to be but one part—the prerequisite part—of our total national military strategy. It is also designed to incorporate not only Navy and Marine Corps forces, but is critically dependent on those of our sister services and the forces of our allies. By eliminating needless overlap in total capabilities, we believe our program will leave no vital maritime tasks uncovered. The past four years have seen major new agreements between the Navy/Marine Corps and the Air Force, the Army and the Coast Guard. In addition we have made extensive progress in multi-lateral and bi-lateral agreements with allied navies and air forces.

The fact that U.S. Air Force AWACS, tankers, and fighters are now an integral part of every significant naval exercise and theater strategy attests to the fact that while inter-service rivalry is strong on the playing fields of service academies, it does not interfere with the effective integration of operating forces.

Our maritime strategy is continually tested, refined, and updated through several important processes. The Navy senior operational commanders review it individually and as a group at least twice a year. It is examined, challenged, probed, and refined at the international level with senior American and allied military and civilian officials. We test it repeatedly in war games and simulations, especially the annual global war games at the Naval War College in Newport, Rhode Island. It is used as the planning base for our major exercises—Navy, joint, and multi-national—and the exercises themselves become the crucible for testing its refinement and challenging its assumptions. Every exercise provides useful lessons learned, to be fed back into the planning process.

In addition lessons learned from every real-world crisis or conflict are applied immediately and integrated into our strategy. Lessons learned from the Falkland Islands War, our own and Israeli operations in Lebanon, the Grenada intervention, and our constant monitoring of Soviet exercises and deployments are all examples. Much of our budget request this year has been modified since last year by the lessons learned from intervening events as applied to our overall strategy. For example, in response to urgent requirements in Lebanon in 1983, the Navy purchased eight Mastiff mini-RPVs (Remotely Piloted Vehicles) from Israel. A Marine detachment has been formed to operate them and a Navy RPV unit will be designated in the near future. Also in December 1983, as a result of lessons learned from the Falklands, we accelerated installation of the Phalanx close-in weapons system on eighteen ships serving in the dangerous waters of the Middle East. As a result of Grenada operations analysis, we have modified communications equipment to improve interoperability in the future with U.S. Army ground forces.

MARITIME STRATEGY AND THE BUDGET

It is important to understand the role that our maritime strategy plays in providing the foundation for building our annual budget. The Department of the Navy Planning and Programming cycle begins with a re-examination of our current strategy, and throughout the process we seek to identify those "strategy-stoppers" and uncertainties that may preclude us from executing it effectively. The principal role in identifying "strategy-stoppers" is played by the joint theater Commanders-in-Chief and the Navy fleet Commanders-in-Chief, in their quarterly reports. Based on their judgments, we then develop programs and plans to negate the most critical "strategy-stoppers" and to hedge against the most significant uncertainties.

PERSONNEL

The past four years have seen the most dramatic change in the manning of the Navy and Marine Corps in the 209 years of our history. From the worst retention and recruiting in postwar history in 1979 and 1980, we have risen to the highest figures achieved since we began keeping records. We are meeting 100 percent of our recruiting goals, and have achieved 95 percent high school graduates in the Marine Corps and 93 percent in the Navy. In virtually every category we have increased retention to record highs: in skilled enlisted ratings, in pilots and Naval Flight Officers (NFO's), in nuclear trained personnel and surface warfare officers. From a situation four years ago when some of our ships could not deploy on schedule because the fleet was manned at only 91 percent, we are now at 100 percent ship manning for a Navy that has grown by more than 50 ships. In 1981, 13 percent of our ships and 25 percent of our aircraft squadrons were reporting themselves not combat ready as a result of personnel shortages. Today those percentages have dropped to less than one percent of each. The petty officer shortfall, which stood four years ago at 22,000, has been reduced now to below 6,000 and will be eliminated in 1988 if current trends continue.

The reorganization of the Naval Reserve to a "horizontal integration" has had the effect of shifting a substantial portion of our force structure manning to the Ready Reserve. A total of 35 ships of the 600 ship Navy will be manned by Selected Reserves, in addition to the augmentation of all naval units by Selected Reserves upon mobilization. The fifteenth active carrier air wing has been deleted from the program and the fifteenth carrier will carry a Reserve Air Wing. This increased dependence on the use of the Ready Reserve has enabled us to hold the active manpower growth to about 1 percent per year.

A very significant indicator of the greater proficiency of our personnel is the aircraft accident rate. 1984 was the safest year for the fourth straight year in naval aviation history and the major mishap rate has dropped from 5.94 mishaps per hundred thousand flight hours in 1980 to only 3.31 per hundred thousand flying hours in 1984. That has brought about dollar savings in uncrashed aircraft in 1984 alone of nearly 200 million dollars and the avoidance of much human tragedy.

READINESS

The fleet is more ready to go in harms way than at any time in recent peacetime history. In the past four years, combat readiness for surface ships has improved by 29 percentage points, for nuclear attack submarines by 34 percent and aviation squadrons by 42 percent. From FY-1981 to FY-1985, actual in-bin munition levels for Navy and Marine Corps major weapons (e.g. missiles and torpedoes) increased by 37 percent. (From FY-1985 to FY-1987, when current contracts will be delivered, these levels will increase by another 41 percent.) Despite the fact that there is a two to three year lag between funding and delivery, our overall ordnance stocks have grown between 10 and 60 percent larger than they were in 1981 and are increasing literally every day as deliveries reach the fleet.

The net increase in spare parts and ammunition has been far greater than the actual increase in funding applied to it. The reason has been the dramatic reforms in the way we have managed these funds. Despite the misinformation provided by self-appointed experts on defense procurement, the Navy initiated a major reform of its spare parts buying under the direction of the Secretary of Defense. Nearly all of the horror stories appearing in the press were the result of a vigorous pursuit of abuse by Navy personnel at all levels. We have been able, for instance, to raise competition in our purchase of aviation spares from a deplorable low of 6.9 percent in 1982 to the current level of 25.4 percent and climbing. As a result, the increase of end items to the fleet is substantially more than the increase of funding would suggest.

SEA-BASED NUCLEAR DETERRENT

The modernization of our sea-based leg of the strategic deterrent is proceeding well. We have added five Trident SSBNs to the fleet since 1981. With seven others authorized and building. The latest addition to the fleet was USS HENRY M. JACKSON, commissioned in October 1984. During sea trials, Trident submarines have met or exceeded all of their design specifications.

The first eight Trident SSBNs are outfitting with the Trident I (C-4) missile, joining twelve Poseidon SSBNs equipped the Trident I. Over the past four years the development schedule of the Trident II (D-5) was begun and then accelerated to an IOC of 1989. In addition, we have greatly strengthened command and control of our strategic forces, including construction of the Extremely Low Frequency (ELF) communication system, and have begun development of a follow-on TACAMO command and control aircraft. Last year we began deployment of the Tomahawk sea-launched cruise missile equipped with nuclear warheads for theater nuclear deterrence. They are now operationally capable on our attack submarines, destroyers, and reactivated battleships. This highly reliable, accurate, low cost weapons systems is a tremendous force multiplier that adds a new and very stabilizing dimension to our deterrent posture.

SHIPBUILDING

Four years ago the president set a goal of doubling the naval shipbuilding program. We have maintained that ambitious goal despite continuing cuts from the original budget estimates. We have brought dramatic new efficiency and discipline to the management of navy shipbuilding, increasing the percentage of the shipbuilding budget awarded competitively from 15.7 percent in FY-1980 to 84.3 percent in FY-1985.

From the 479 battle force ships in the fleet when President Reagan took office, the fleet has grown to 530 ships today and 545 by the end of the fiscal year, reaching 600 by the end of 1989. There are currently 103 naval ships now under construction, conversion or reactivation, at twenty-one different yards throughout the United States. By cancelling the Carter Administration plans to retire the aircraft carriers CORAL SEA and MIDWAY, and the DDG-2 and DDG-37 class destroyers, and by reactivating the battleships, we have been able to expand the fleet rapidly over the past four years without sacrificing investment in new construction for the 90's and the next century. An added benefit of this approach has been a major influx of new business and employment in the shipyards doing conversion, reactivation, overhaul, and ship repair. Because of the major emphasis on readiness maintenance spending, we have been able to reduce the backlog of ships awaiting overhaul from sixteen in 1981 to zero today even as we have increased the fleet by more than 50 ships.

A substantial benefit to the economy and to deficit reduction has been the immediate creation of very substantial numbers of jobs in a declining shipbuilding and repair industry. The Navy shipbuilding and repair programs now account for over 80 percent of all employment in that industry in the United States. On the larger impact of Navy shipbuilding, it has been estimated that every billion dollars in the Navy shipbuilding program creates 27,000 direct jobs and 15,000 secondary jobs.

AIRCRAFT

In each of the eight years preceding the Reagan rearmament program, the Department of the Navy was not able to procure enough aircraft to replace those lost through peacetime attrition. In each of the past four years, however, naval aircraft procurement has been nearly doubled from the average levels of the preceding four, and procurement of aircraft spares has more than tripled. These high rates of procurement have been maintained, despite successive budget cuts during those years, because of an historic reversal of cost trends in naval aircraft programs. For the third straight year, all naval aircraft procurement programs are on a firm-fixed-price contract basis, precluding the possibility of production cost overruns, and the annual prices of our new tactical aircraft have actually been coming down. Competitive pressures have been maintained by keeping four separate fighter and attack aircraft in production. In addition, we have been able to maintain stable production rates through most of our aircraft lines. The first Navy and Marine Corps strike fighter squadrons are now in full operation with the F/A-18 Hornet. The carrier CONSTELLATION has now deployed with the first operational carrier air wing to include the F/A-18.

As part of the Reagan Administration emphasis on the Ready Reserve, new reserve units have been established and our reserve pilots are flying front-line Navy aircraft. Some of these flying units are augmentation units to fill out fleet squadron strength upon mobilization, and others are commissioned squadrons.

WEAPONS AND AMMUNITION

In the decade preceding the Reagan Administration, the Marine Corps was unable to procure sufficient ammunition to replace the stocks expended in normal peacetime training. As a result, sustainability and war reserves disappeared. During that same period, the Navy was held to such low levels of procurement of ammunition, missiles, and torpedoes that four years ago we did not have sufficient stocks to load out the reduced fleet of 479 ships even once with full magazines. We had less than a week's supply of the most important air defense munitions. Such enormous shortages created over a decade of unilateral disarmament in the 70's are not going to disappear overnight. But four years of sustained growth in our ammunition accounts has now begun to refill our munitions stockpiles. Ammunition and weapons funding was increased by more than 65 percent in real terms over the last four years, and a major reform of our procurement practices in munitions, emphasizing competition and dual sourcing, has made it possible now to have in hand the production rates necessary to reach our complete war fighting sustainability goals by 1989. That procurement rate is funded in the current budget.

THE NAVY IS READY

As the progress report above makes clear, the course to re-establish maritime superiority set four years ago has not waivered. Momentum has continued to keep us on schedule. We have achieved an effective balance between building for the future and making the fleet we have today a maximum-ready fighting force. These results have already added enormously to our ability to deter Soviet adventurism and to stabilize the peace. The Fleet and the Fleet Marine Force are more ready to go in harm's way than at any time in postwar history. Our friends and adversaries alike know this.

SOVIET NAVAL STRATEGY AND OPERATIONS DURING 1984

No plan, however well conceived, and no strategy, however well knit, should proceed with its assumptions unexamined. As the President's second term begins, it is essential that we consider once again the basis of our maritime strategy. Has anything changed about the Soviet threat that warrants an adjustment of our program? Is the international environment more conducive to the peaceful pursuit of maritime interests?

The clear answers to these questions are provided by the Soviets themselves and the nature of their naval operations.

During the 70's, the Navy described annually to Congress the enormous investment and effort going into the blue-water naval construction program in the Soviet Union. During that same period, we began to see their success in establishing major naval and naval air facilities around the globe in Viet Nam, Cuba, Ethiopia, South Yemen, Angola, and other areas. Moreover, we have observed them develop their exercises and training around a blue-water strategy. In 1984 we have seen more visibly than ever the fruits of their substantial efforts and investments of the 60's and the 70's. Today they sit astride our vital maritime vulnerabilities in the Caribbean Straits, the Southeast Asian choke-points, the East and West African oil sea lanes, the Middle East oil sources, and off the Northern and Southern flanks of NATO.

Early in 1984 the Soviet Navy conducted the largest naval exercises they have ever conducted in the European theater. More than 200 naval combatants deployed in the Barents, Norwegian, and North Seas. We saw the long-range use of air force and navy BACKFIREs and medium and heavy bombers, and we saw the employment of about 70 Soviet submarines in an integrated surface, submarine; and amphibious, and air exercise. The nature of their exercise left little doubt that the Soviets seek to gain control of the Northern flank of NATO immediately in the event of war.

In our own hemisphere during 1984, the Soviets again deployed a major surface task force, including the MOSKVA guided missile helicopter cruiser, a new UDALOY class guided missile destroyer, a replenishment ship, and a submarine to the Caribbean. This was followed later in the year by another surface task force deployed to the Caribbean with a new SOVREMENNYY class guided missile destroyer and four other ships. These were the 23rd and 24th regular deployments to the Caribbean by the new Soviet blue-water fleet. This is one more manifestation of their projection of maritime power into the hemisphere most visibly evidenced by the now near-continuous off-loading of Soviet military hardware from east-bloc ships in Nicaragua.

In the Pacific the Soviets now have a permanent Pacific fleet of more than 500 ships including more than 130 submarines and 2 aircraft carriers. As we saw in the newspapers with the collision between the KITTY HAWK aircraft carrier and the Soviet VICTOR submarine, their submarines now are deployed regularly among all of our exercises and astride all of our sea lanes. They are more aware than most Americans that the United States has become dependent for nearly half of its oil needs on the sea lanes and that, in fact, the U.S. is considerably more dependent on sea-borne Alaskan oil than on Middle East oil. They are more aware than most Americans that our sea-borne commerce with our Pacific trading partners now amounts to more than 130 percent of our commerce with our Atlantic trading partners.

The Soviets are demonstrating every day at sea that we no longer have a passive defensive strategy available to us on the world's oceans. Unlike World War II, we do not have a merchant marine able to sustain losses in a submarine war of attrition. The Soviets today have more than 270 attack submarines, while Hitler very nearly won the Second World War in 1942 with about 60 submarines operational during most of the year.

The Soviet submarine threat is of particular concern and 1983 and 1984 saw major developments. Not only did we have two incidents of Soviet nuclear attack submarines actually hitting or inadvertently fouling our surface combatants, but we have now seen a developing pattern of regular deployments of nuclear attack submarines close off our principal naval ports. These Soviet nuclear submarines today have made great strides in quieting and overall capability in sensors and weapons. They currently are building three new classes of nuclear attack submarines, the SIERRA, MIKE and AKULA, and one new class of diesel attack submarine, the KILO. They are building two distinct classes of ballistic missile submarines, the TYPHOON and DELTA IV, and have at least one new submarine-launched ballistic missile program, the SS-NX-23.

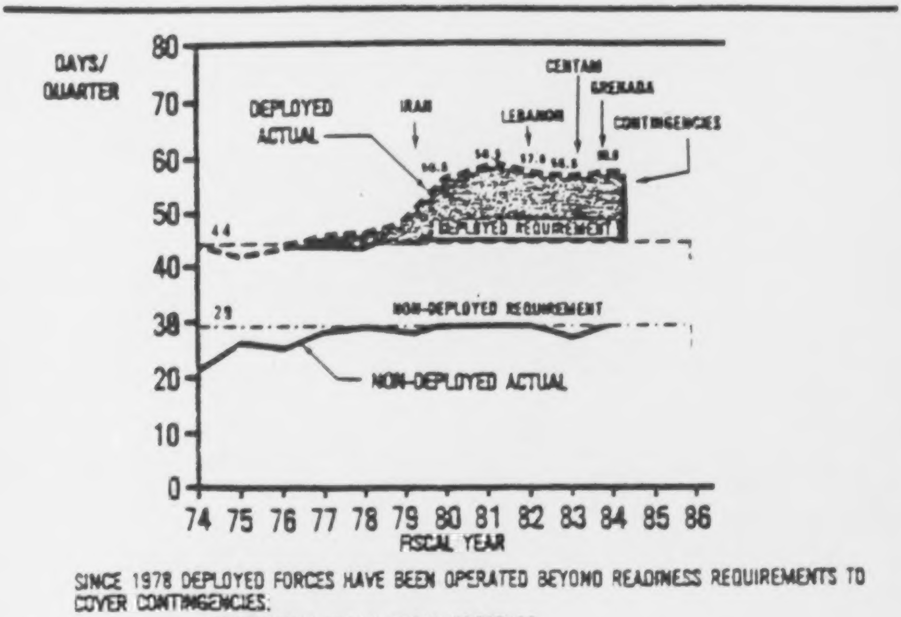
While the Soviets have had long-range cruise missiles capable of land attack deployed for more than 20 years, they deployed in 1984 for the first time a longer-range submarine-launched cruise missile comparable to our Tomahawk. While this new nuclear capability does not add to the target coverage or overall threat already existing against U.S. targets in their SLBM force, it does complicate our ability to ensure warning time for attack against our bomber bases. For the last five years the Soviets have averaged a production rate for all submarines of about 10 per year. This rate is expected to continue for the next four years at least.

As you have seen reported recently in the press, the Soviets are well along on their construction of their first full scale nuclear powered aircraft carrier able to operate catapult-launched and arrested naval aircraft. We expect this ship to be operational in about 1990 and for it to be the first of a series.

NAVAL OPERATIONS IN 1984

It is well known by this committee that the naval service operates little differently in peacetime than it does in war. Naval operations in 1984 reflect the many responsibilities carried in normal peacetime deterrence around the world. Four years ago I testified that we were at a higher OPTEMPO then we were at the height of the Viet Nam War and that the Fleet was spending more time at sea than it had even averaged in the Second World War. It is one of my great disappointments that, despite adding some 50 ships to our operational fleet, we have been unable to make an appreciable reduction in OPTEMPO and the excessive time that naval personnel must spend away from their families. It is a top goal of the next four years to make substantial improvements in the time away from home port required of our sailors. A good example of this peacetime OPTEMPO was the deployment of the battleship NEW JERSEY during 1983 and 1984. She left Long Beach, California in June of 1983 on what was to have been a 2½ month shakedown cruise in the Western Pacific. She traveled to Thailand and the Philippines for joint exercises and was then ordered to Central America where she cruised for several weeks. She then transited the Panama Canal and proceeded, at an average of 25 knots, non-stop to a position off Beirut to support the Marine Amphibious Unit ashore. She remained there until May of 1984, having spent 322 days underway with only 3 port visits on a voyage that covered 76,000 miles. Yet during that full-year cruise, she never went below C-2 in readiness status and her crew morale and performance could not have been exceeded. She was assisted by more than 10 thousand sailor days of service from selected ready reservists on voluntary active duty tours.

SHIP OPTEMPO

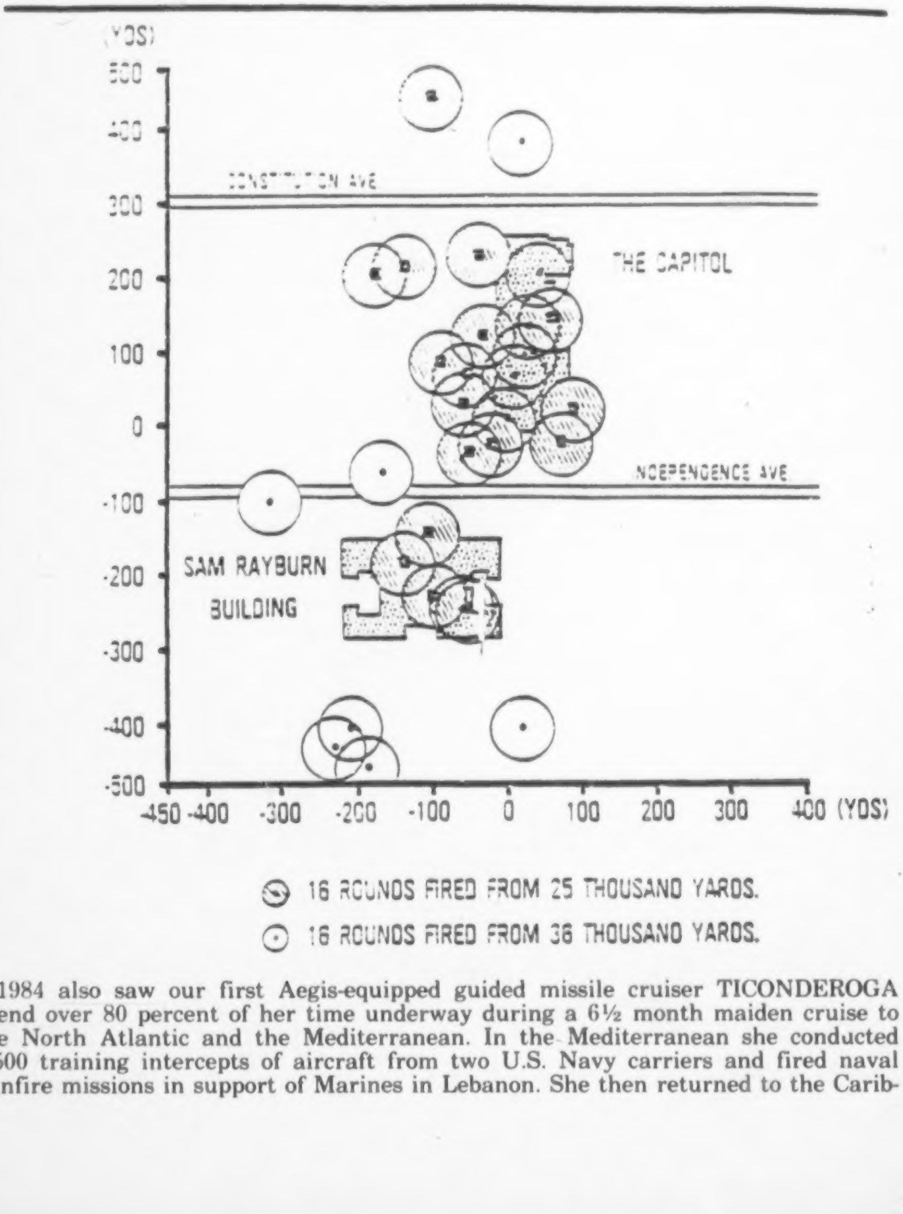


SINCE 1978 DEPLOYED FORCES HAVE BEEN OPERATED BEYOND READINESS REQUIREMENTS TO COVER CONTINGENCIES:

CONTINUOUS INDIAN OCEAN PRESENCE
CENTRAL AMERICA/JITTERY PROP
LEBANON
GRENADA

While off Beirut, NEW JERSEY proved the tremendous worth of the battleships. Operating in support of the Marines ashore, she fired 5-inch and 16-inch naval gunfire on numerous occasions. On one day alone, she put 300 rounds of 16-inch on a ridge overlooking Beirut on which were placed hostile artillery batteries that had fired more than 5000 rounds into areas of the city containing U.S. personnel, inflicting substantial civilian casualties. While television interviews with hostile personnel reported that the gunfire didn't hurt, the firing into Beirut ceased immediately and ten numbered hostile batteries disappeared from the reporting force structure. The very high accuracy of the 16-inch gunfire and the lethal effect of the 1900- and 2700-pound projectiles makes the battleship one of the most effective weapon systems in the world today. The chart below depicts the measured accuracy of the qualification firings of the battleship IOWA on 21 July 1984. Firing from ranges of 8,000, 15,000, 25,000, and 35,000 yards, IOWA literally blanketed the 200 X 200 meter square target with shells fired from distances of 13 and 18 miles.

USS IOWA (BB-61) 16 INCH FIRINGS
21 JULY 1984



1984 also saw our first Aegis-equipped guided missile cruiser TICONDEROGA spend over 80 percent of her time underway during a 6½ month maiden cruise to the North Atlantic and the Mediterranean. In the Mediterranean she conducted 2,500 training intercepts of aircraft from two U.S. Navy carriers and fired naval gunfire missions in support of Marines in Lebanon. She then returned to the Caribbean for a final OPEVAL test in which she successfully downed 10 of 11 multiple target drones.

During 1984 the aircraft carrier RANGER and her battle group operating in the Pacific and Indian Oceans set a record for sustained continuous operations for conventionally powered carrier battle groups. They remained at sea for 121 days, steaming more than 50,000 miles.

Early in 1984 the Mediterranean Amphibious Ready Group evacuated nearly 1,000 non-combatant Americans and foreign nationals from Lebanese ports using Marine helicopters and Navy landing craft. The evacuees were then transported from our amphibious ships off Lebanon to Cyprus. This was the same amphibious group that had earlier evacuated the American citizens and students from Grenada.

In 1984, we also deployed on short notice to find and neutralize mines which were endangering shipping in the Gulf of Suez. The surveying ship HARKNESS, the amphibious transport dock SHREVEPORT, and a detachment of MH-53D minesweeping helicopters were provided, supported by U.S. Air Force units and in cooperation with allied naval forces. Three minesweeping helicopters and the Middle East Force flagship USS LA SALLE also operated off Saudi Arabian ports in response to a request from the Saudi government. During this combined operation, minesweepers from the United Kingdom recovered a new mine manufactured in the Soviet Union and believed to have been sown by a Libyan vessel.

In 1984, our SSBNs completed their 2,200th patrol, and routine naval presence was maintained continuously in the Mediterranean, the Western Pacific, the Indian Ocean and the Caribbean. In addition, significant exercises and deployments were conducted off both coasts of South America and off West Africa, and in the Norwegian, Baltic, and Black Seas, and the southwest Pacific. Naval exercises were held with virtually all our maritime allies and virtually all major naval exercises were conducted with active participation by U.S. Air force and Coast Guard and some Army units. In the course of these deployments we concluded the first visit to an Indian port by a U.S. naval warship in 13 years.

U.S.-PRC NAVAL RELATIONS

At the invitation of Defense Minister Zhang Aiping of the People's Republic of China, I traveled to China for 3 days of discussions with Premier Zhao Ziyang, Defense Minister Zhang Aiping, Admiral Liu Huaqing, head of the Chinese Navy, and other officials of the Peoples Liberation Army.

Continuing the initiatives of Secretary Weinberger with his visit to China in September 1983, we discussed actions to begin cooperative relations between the United States Navy and Marine Corps, and the Chinese Navy. The Chinese agreed in principle to permit U.S. naval ships to visit Chinese naval ports, and to send Chinese naval ships to visit U.S. ports at a later time. We agreed in principle to begin discussions on cooperating on the modernization of the anti-submarine warfare capabilities of the PRC Navy. I extended an invitation to Admiral Liu to visit the United States as a guest of the Chief of Naval Operations and the Commandant of the Marine Corps. He in turn asked me to extend an invitation to Admiral Watkins and to General Kelly to visit the PRC. An invitation was also extended to the Minister of Defense and Admiral Liu to visit a carrier battle group at a convenient time in the future.

The remainder of the visit was spent as guests of the PRC Navy visiting the North Fleet and East Fleet headquarters at Oing Dao and Shanghai, and inspecting various schools and ships and facilities of the Chinese Navy. The welcome extended by the Chinese Navy could not have been more cordial and our discussions were serious and productive. We are confident that cooperation between our two navies will be to the mutual benefit of both in increasing the stability of peace in the Western Pacific.

DEPARTMENT OF THE NAVY MANAGEMENT INITIATIVES

The remarkable progress achieved in four years in the naval recovery program is testimony to the success of the vigorous program of management reform instituted by Secretary Weinberger. Four years ago he reversed a long and disastrous trend toward centralization and bureaucratization of management, with its attendant diffusion and destruction of line accountability. His leadership has brought about a new discipline and new accountability. Management authority has been returned to the Service Secretaries and they have been held accountable for achieving real reform in the development and procurement process. The Committee should take special note of the five fundamental changes made in the management of the Department of the Navy:

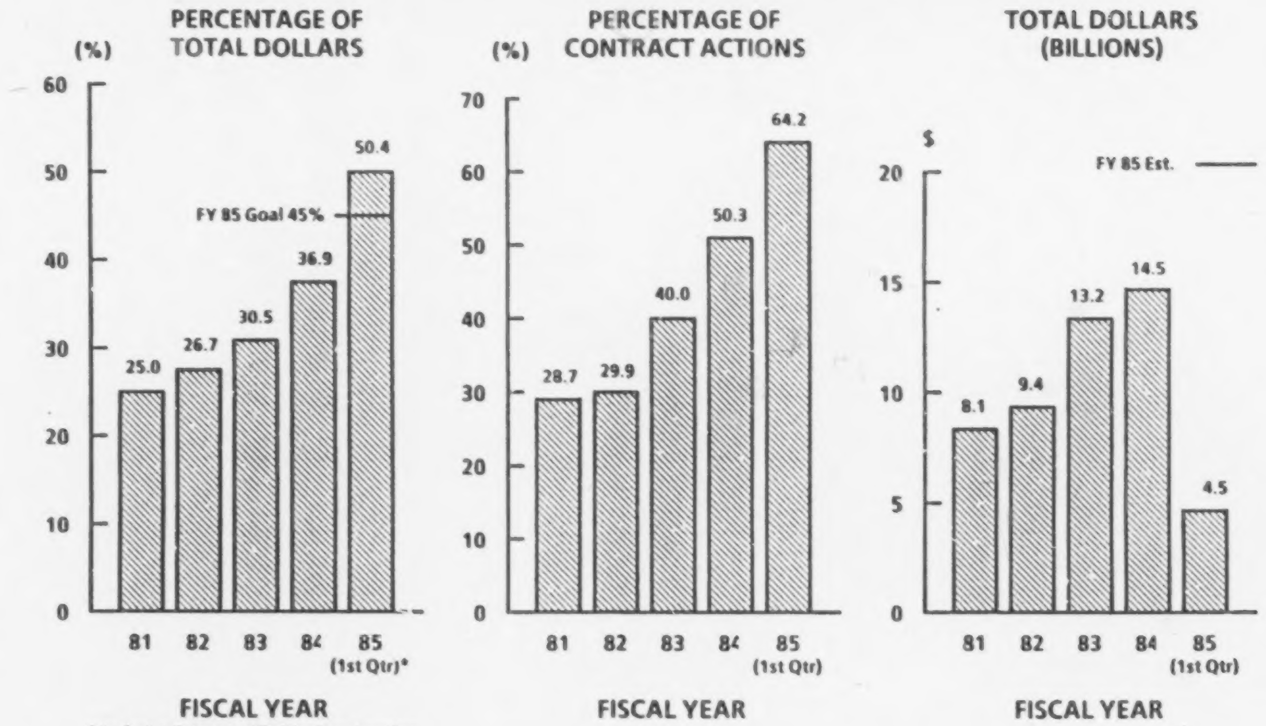
First, we have sought true competition, not merely the appearance of competition through source selection followed by decades of monopoly production. We have pursued a policy of establishing second sources in every appropriate program. We have raised the percentage of competition in our shipbuilding from 15.7 percent in 1980 to 84.3 percent in 1985. We have raised acquisition of all spare parts from only 15.7 percent competitive in 1981 to 28.8 percent in 1984, with a goal of 40 percent in FY-1985.

Two years ago we established at flag rank a Competition Advocate General reporting to the Assistant Secretary of the Navy and the Chief of Naval Material. He now has a network of some 300 Competition Advocates throughout the Navy's Acquisition Commands.

In FY-1984 we awarded 14.5 billion dollars competitively, or 37 percent of all Navy procurement dollars. That performance reflected a 54 percent increase over the total dollars we awarded competitively in FY-1982. Over 50 percent of all individual contract actions executed in FY-1984 were competitive.

Contracts savings from this new competitive approach in shipbuilding have been enormous. The savings from just the first two years of competition in the previously sole-sourced AEGIS cruiser program have now reached 382 million dollars below the budget projections. In November 1984 we awarded six ship contracts under this competitive procurement system on fixed price contracts. This brought in the ten ships involved for 243 million dollars less than budgeted. Competition in FY-1984 and FY-1985 for the SSN-688 class submarines resulted in savings of 184 million dollars from the President's budget requests. The list goes on and on. As a result of these competitive savings, we were able to fund the entire battleship MISSOURI at 430 million dollars from contract savings and, in addition, were able to contribute 640 million dollars from our shipbuilding savings to assist in funding the MX program.

DEPARTMENT OF THE NAVY
PROCUREMENT COMPETITION PERFORMANCE



* Includes "Seasonal" Ship Construction First Quarter Awards

In a major initiative this year we have selected Pratt & Whitney to compete annually with General Electric as the second source for the superb Navy-developed F-404 fighter engine.

Second, gold plating control. Without question, competition and fixed price contracts are the formula for reducing costs in major procurement. But they can also be a formula for disaster, litigation, and claims, if a military service does not discipline its tendency to gold plate and to increase and change requirements during contract execution. Gold plating is now under firm control in the Department of the Navy. An Air Characteristics Improvement Board and a Ships Characteristics Improvement Board have now been established to control design and equipment changes in production aircraft and ships. This has proved to be a very effective obstacle to gold plating and will carry into force our "Block Upgrade" policy. Under this policy, necessary changes and modernizations in design are made only with new annual contracts and are priced and negotiated at that time rather than piecemeal in the middle of production runs. Very substantial savings have resulted from this procedure. No contract or engineering changes may be submitted for negotiation without the signature of the Commandant of the Marine Corps or the CNO, and the Secretary of the Navy.

Third, program stability. You will note that the personnel readiness, shipbuilding, and aircraft procurement goals have not been changed as I present to you the sixth Reagan recovery budget. This stability is unprecedented in peacetime history, avoiding the ragged ups and mostly downs of previous five year plans with the terrible costs and efficiency penalties that such uncertainty brings. Most of our aircraft programs have remained at stable long-term levels, and the multi-year procurement initiatives that we have been able to achieve in the C-2A aircraft, NATO SEA SPARROW missile, MK-46 torpedo, and CH-53E helicopter programs are saving the taxpayers more than 400 million dollars compared to their annual purchase prices.

Fourth, contract discipline, accountability, quality assurance. We have moved from a policy of treating cost-plus contracts as normal to treating them as being only acceptable as an absolute last resort for very high risk programs. Our policy now requires more equitable sharing between the government and its contractors, providing increased incentives for excellent performance and immediate contractor penalties for poor performance. We have put all of our aircraft procurement programs on firm-fixed-price type contracts and all of our ships on fixed-price incentive contracts with a 50/50 share line above and below the contract price. We have renegotiated contracts inherited from prior years to eliminate the more lenient terms on such programs as Tomahawk, Trident and the SSN-688 submarine. We now provide our contractors with the opportunity to make more profit than heretofore allowable by achieving performance that nets the taxpayer a substantially lower price. The corollary is that we require the contractor to bear immediately the cost of poor performance. Industry has responded at first with reluctance and now mild enthusiasm. After years of very late deliveries, cost overruns, and litigation and claims, all of our submarines are now on, or ahead of, schedule. The four most recent Trident submarines were delivered to the Navy four to seven weeks early. The USS THEODORE ROOSEVELT (CVN-71) was launched last October nearly 18 months ahead of schedule and more than 100 million dollars under budget.

Fifth, research and development reform. In a major effort to make dramatic increases in the productivity of our R&D dollars and to substantially shorten the time to concept-to-delivery, fundamental changes have been made in the management of our research and development. In 1981 we had more than 500 R&D programs. Today we have reduced that to 400, while increasing steadily the amount of funding placed in these programs. We have moved away from cost-plus contracts for R&D toward requiring the contractor to participate in risk sharing.

Beyond even this, we have pioneered a dramatic new concept in firm-fixed-priced packaged development in aircraft, where appropriate. The first of these breakthrough-initiatives were the jointly-negotiated fixed-price contracts for the complete redesign of the F-14D and the A-6F aircraft upgrade programs. Both of these aircraft will be entirely reequipped with new engines, new avionics, new survivability features, new cockpits, and new radars, for a combined total R&D cost of a firm-fixed-price contract totaling less than half of the cost that it took to develop the F/A-18. The third example of this approach was the contract signed in 1984 with McDonnell Douglas and British Aerospace on a firm-fixed-price package of 438 million dollars for the complete development of the T-45A Navy carrier jet trainer. This contract was brought in at about half of the budget estimate of 810 million dollars.

Emphasis in our research and development programs will continue to concentrate on achieving levels of high technology as a fundamental tool of American defense policy. We can never hope to match the numerical superiority of a totalitarian adversary such as the Soviet Union, but we can indeed maintain technological superiority to counter its advantage in numbers. The trendy arguments that cheaper and smaller are better are simply false. They have been invalidated time and time again in the Gulf of Sidra, the Bekaa Valley, and the Falklands. The result we are achieving now with the F/A-18 requiring less than half the maintenance manhours per flight hour of the aircraft that it replaces has enabled us to reduce our manpower requirements by some 50 personnel per squadron.

Similarly the TICONDEROGA, the first Aegis cruiser, has completed its first deployment manned by only 300 enlisted men and 26 officers, roughly a third of the complement needed for the CG-10 class that it replaces.

As previously noted, naval aviation has just completed its fourth straight safest year in history. The current generation of high tech naval aircraft such as the F/A-18, F-14, and A-6E now have a safety record more than twenty times better than the so-called low-cost fighters of thirty years ago.

RESULTS

The results of these management initiatives are quite dramatic. A few highlights are listed below:

The disputes, litigation, claims, cost overruns, and schedule delays that characterized naval shipbuilding in the 70's have been eliminated. Over the last three years (FY-1982-4), 71 ships have been delivered to the Navy of which 27 were ahead of schedule, 32 on schedule and only 12 behind schedule. The net of all three years is 31 months ahead of schedule for all ships. After years of bitterness and massive cost overruns and claims in our submarine program, nearly all submarines have been delivered on or ahead of their contract delivery dates for the last three years and on or under budget. For the fourth straight year there has not been a single new construction contract shipbuilding claim outstanding against the Navy.

Aircraft Carriers.—The contract for THEODORE ROOSEVELT (CVN-71) was modified to include an incentive clause for delivery of up to 14 months in advance of the contract delivery date. The ship was launched in October of 1984, 18 months ahead of the original schedule and is currently more than 100 million dollars below budget. The FY-1983 multi-ship contract for ABRAHAM LINCOLN (CVN-72) and GEORGE WASHINGTON (CVN-73) included an acceleration of 44 months for delivery of the ships, and more than 1 billion dollars in cost savings have now been verified. Both ships are under construction.

Aegis Cruisers.—Bath Iron Works was selected as a second source to compete with Litton for procurement of Aegis cruisers. Contracts were signed in December of 1983 for the first three cruisers to be competitively awarded—two to Litton, and one to Bath. The contracts resulted in a net constant dollar savings of more than 100 million dollars compared to the previous year's sole source award of 3 ships to Litton. In November 1984, the second year of competition resulted in Bath winning two ships and Litton one, with a net constant dollar savings of 97.7 million dollars compared to the 1984 award.

Battleships.—NEW JERSEY was recommissioned in December of 1982 ahead of schedule and under budget. IOWA was delivered well ahead of schedule and under budget in April of 1984 and is currently deployed in the Caribbean. MISSOURI was fully funded from contract savings last year and is currently ahead of its reactivation schedule in the Long Beach Naval Shipyard. Planning and preparation is currently going forward for the fourth and final reactivation, of WISCONSIN, with long-lead funding contained in this year's budget request.

Build/Convert and Charter Programs.—Thirteen T-AKX maritime prepositioning ships (MPS) and five T-5 tankers have been contracted for and are under conversion and construction. The first four MPS ships were delivered during the last six months and two of those four have already participated in logistics exercises. These ships provide a dramatic new capability to preposition the equipment and supplies to support three Marine Amphibious Brigades in areas of potential crisis around the world. The first six of the MPS ships will be completed two months ahead of original schedule and under budget.

Five years ago 15.7 percent of our shipbuilding program was awarded competitively and 84.3 percent sole source. In the FY-1985 shipbuilding program 84.3 percent of the ships will be awarded competitively and only 15.7 percent sole source.

For the past two years, all our airframe contracts except the multi-year C-2 contract have been negotiated on a firm-fixed-price basis. The FY-1983 contracts resulted in a savings of 10.3 percent from our original budget estimates. Additionally, those FY-1984 airframe contracts that have been negotiated have resulted in a 3.4 percent reduction in recurring flyaway costs.

In the major Reagan administration effort to reinvigorate the maritime industry and the merchant mariner profession, a total of 17 more ships, including cable ships, missile range ships, and fleet tugs, will be offered for contract manning in the current year. This will raise to 51 the total of naval ships offered for contract manning added by this administration.

The Navy Department (from FY-1982 through FY-1984) increased by 34 percent in dollar value its awards to small businesses, including women-owned and minority-owned concerns. These contracts to small business totaled 6.1 billion dollars in FY-1984, reflecting a new commitment to bring the benefits of competition and the small business industrial base to Navy procurement.

The new independent cost estimating organization has been established and has been functioning effectively under the Comptroller of the Navy to independently advise the CNO, Chief of Naval Material, and Navy Secretariat on program cost estimates.

A year ago I reported to the committee the establishment of a new Navy Acquisition Reporting System. It has now been functioning for a full year and has been a dramatic success. It involves a new, simple, and straightforward acquisition reporting system for the top 60 programs. It requires quarterly reports on any changes of estimated cost for R&D or production or changes in schedule for each of those 60 programs and provides early warning of performance difficulties. While this system is primarily meant for senior Navy management, its effectiveness makes it a prime candidate for eventual replacement of the current Selective Acquisition Reporting System.

Provision of guidance to promotion boards has been modified to increase emphasis on the performance of officers in acquisition management billets.

Revision of assignment policy for Program Managers and Industrial Facilities Commands. The minimum tour length for officers serving in these important acquisition billets has been lengthened to four years. Arrival and departure from these assignments now is planned to coincide with major Department of the Navy Systems Acquisition Review Council (DNSARC) milestones and/or program starts or completions.

Increases in manning of Navy Plant Representative Offices. Substantial increases were begun in calendar year 1983, and have continued since, to raise the numbers of naval personnel managing contracts in contractor plants.

Establishment of BOSS. The Department of Navy has instituted a spare parts procurement program called "Buy Our Spares Smart" (BOSS). It is particularly frustrating to us to find that the abuses and overcharging uncovered by the Navy itself over the past two years—items for which we recovered monies—are being used by headline-hunting critics seeking to discredit the very effort itself. Working with suppliers and parts contractors, we have made great progress in locating abuses, receiving refunds, challenging sole-source relationships, locating alternative sources, and reducing barriers to competition for spare parts by identifying and eliminating proprietary-data requirements. There are more than 2.3 million inventory items in the Navy's spare parts supply system, and we are methodically reexamining the 1 million under Navy control, over 100,000 of them each year.

DEPARTMENT OF THE NAVY BUDGET FY 1986

The source of the Navy/Marine Corps budget

Commentators with little knowledge of defense policy have criticized the service budget requests as exercises in simply asking for more programs that have a momentum of their own. Nothing could be further from the truth. As described above, the preparation of the 1986 budget began with the foundation of national strategy and the maritime objectives assigned to the Navy and Marine Corps. From maritime strategy came the force structure planning requirement. Throughout the year, the strategy and the force levels have been refined and tested in multi-national exercises, simulations and wargaming. As noted earlier, the most important input to the preparation of this budget are the semi-annual assessments of the operational and theater commanders in their net assessments and recommendations for funding priorities. The lessons learned from real world operations and conflicts such as the Falklands and the Middle East are applied and often further modify the budget planning. From the start of this FY-1986 programming process, in September 1983, the application of common sense in placing priority on the "strategy stoppers" has been applied throughout. Then after exhaustive scrubbing and debate within the

Department of Defense and with other agencies of the Government the Department of the Navy budget request has been completed.

PERSONNEL READINESS

The FY-1986 budget continues to place personnel readiness at the top of spending priorities as in the previous four budgets. Nothing is more important than our personnel. The tremendous turn-around in morale and personnel quality and performance has proved to the skeptics that, for the Navy and Marine Corps, the All Volunteer Force produces a better and readier force for the long term than a peacetime draft. This success, however, depends on the maintenance of adequate compensation and adequate quality of life. Nothing is more important than maintaining budgetary support for those priorities. Our budget request contains the following priority programs:

A 3 percent pay increase on July 1, 1985, which would be the equivalent of a 4 percent overall increase started at a later date. Together with the 4 percent increase in January 1985 this should stay close to matching the inflation rate.

Sea Duty Enhancement Programs.—Naval service can be arduous, dangerous and dramatically ill-paid when compared to civilian careers requiring comparable skills. We have been able to bring this into better balance through our sea pay, selected reenlistment bonus, nuclear officer incentive pay, submarine pay, and special pays. These are continued and adjusted upward in the current budget. We have new initiatives of particular interest in correcting the injustice currently imposed in reimbursement of travel expenses, by increasing certain reimbursements and weight allowances.

Increases in End Strength.—We will continue to add more than 20 ships per year to the fleet from now until 1989. We must have increased end strength to man these ships and increased numbers of aircraft and support units. Because of Congressionally imposed reductions in the last three years, our end strength increase has not matched requirements of the ships that have been added. The shortfall has been imposed on the shore establishment and that expedient can no longer absorb further cuts. Our active force end strength must be raised in fiscal year 1986 by 15,000 for the Navy and by 1,200 for the Marine Corps. Reserve force structure also needs expansion. We are requesting an increase of 10,500 reserve billets for the Navy and 1,262 for the Marine Corps.

Aviation Officer Career Pay.—One of the most dramatically successful and cost effective compensation initiatives in Navy history has been the AOCP program. Retention of naval aviators has more than doubled in the last four years of paying AOCP. Pilots and Naval Flight Officers are currently being retained at the rate of 56 percent and 81 percent respectively. Since the inception of the program, 708 additional aviators have remained on active duty as a direct result of AOCP. The resulting cost savings were 578.7 million dollars, which would have otherwise been needed to train their replacements. In addition, the much higher experience level that this bonus has brought us in naval aviation has resulted in the fourth straight record year in naval aviation safety. Since 1981, 126 aircraft have been saved compared to what would have been lost due to pilot error at the accident rate prevailing before the inception of AOCP. This has resulted in a dollar savings of approximately 685 million dollars.

In accordance with the Congressional guidance in the 1985 bill, we have modified the application of the bonus to focus it on those aviation communities where shortages persist. These are principally the sea-going communities, where family separation remains the single strongest factor leading to resignations. The latest tabulation of shortages, by community, appears below:

Community		Projected 2d tour inventory	Projected 2d tour requirement	Projected difference
VAM/VAO	NFO	163	309	−146
(Med. attack/ECM)	Pilot	90	209	−119
VAL (Lt. attack)	Pilot	166	351	−185
VF	NFO	165	317	−152
(Fighter)	Pilot	139	317	−178
VS	NFO	125	217	−92

—Continued

Community		Projected 2d tour inventory	Projected 2d tour requirement	Projected difference
(Carrier ASW)	Pilot	80	150	−70
HELO	Pilot	558	1,194	−636
VAW	NFO	103	150	−47
(Carrier AEW)	Pilot	57	108	−51
VRC (Carrier trans)	Pilot	35	150	−115
VO	NFO	114	175	−61
(ECM/comm)	Pilot	67	142	−75
VP	NFO	339	317	+82
(Patrol)	Pilot	387	401	−14
Force Support	Pilot	40	50	−10

In each successive year of this bonus, Congress has imposed restrictions and reductions. We have seen a significant drop in the pulling power of this bonus during the base months.

The smaller numbers and the shorter eligibility have reduced the attractiveness of the bonus to an appreciable degree. We have seen a sudden spurt in resignations of pilots, and we believe the time to deal with this problem is right now before it reverses the positive trend of recent years. We will be proposing modifications to the committee which should increase the attractiveness of the AOCP bonus and eliminate the current loss of entitlement to hazardous duty incentive pay and aviation career incentive pay.

Nuclear Officer Incentive Pay.—Retention of our nuclear trained officers has improved by 9 percent over the past four years. Nevertheless, 13 and 24 percent shortfalls of nuclear trained submarine and surface warfare officers remain. The accession bonuses paid to officers entering the program have met with great success. This year we achieved 92 percent of our accession goal. The provision of these pay incentives for nuclear trained officers must be continued if we are to achieve our goals of manning the nuclear powered ships with adequate numbers of trained and experienced officers.

Recruiting and Advertising.—As the target population for recruiting grows smaller every year and the economy grows stronger recruiting becomes increasingly more challenging. We have found disturbing survey evidence that youth awareness of Navy programs is declining steadily. Navy advertising acts as a significant tool for recruiting and we are asking for increased funding for both recruiting and advertising.

MATERIAL READINESS

Next to personnel, material readiness has received the highest funding priority of all Navy accounts during the last four years. As we move steadily to our 600 ship Navy in 1989, we have maintained funding for material readiness proportionate to the growth in ships and aircraft. The FY-1986 budget should continue to support that proportion and the steady improvement in overall readiness outlined earlier. We are requesting funding, for instance, for the ships maintenance program to provide for the overhaul of 35 active and 6 reserve ships. This is being done at considerably lower cost because of our shifting of overhaul contracting to a more competitive process based on fixed-price bids. It reflects also the carefully engineered extension of the operating periods between overhauls for ships and aircraft, and overhauling selected systems during shorter regular maintenance availabilities.

Decentralization and Increased Accountability for Depot Level Repairable Components.—In a major innovation in the management of maintenance funding, we have instituted a decentralization of the management of Depot Level Repairable (DLR) components to the ship and the aircraft squadron level. We are testing financing, procurement and repair of DLRs through the Navy Stock Fund starting in April 1985. This initiative establishes a buyer/seller relationship between the stock fund and its customers who in turn are held accountable for their expenditures. In our experience, this brings a much more frugal approach to ordering, based on the truly needy, and an incentive to repair at the lowest authorized level and not waste repairable assets which can be turned in for credit.

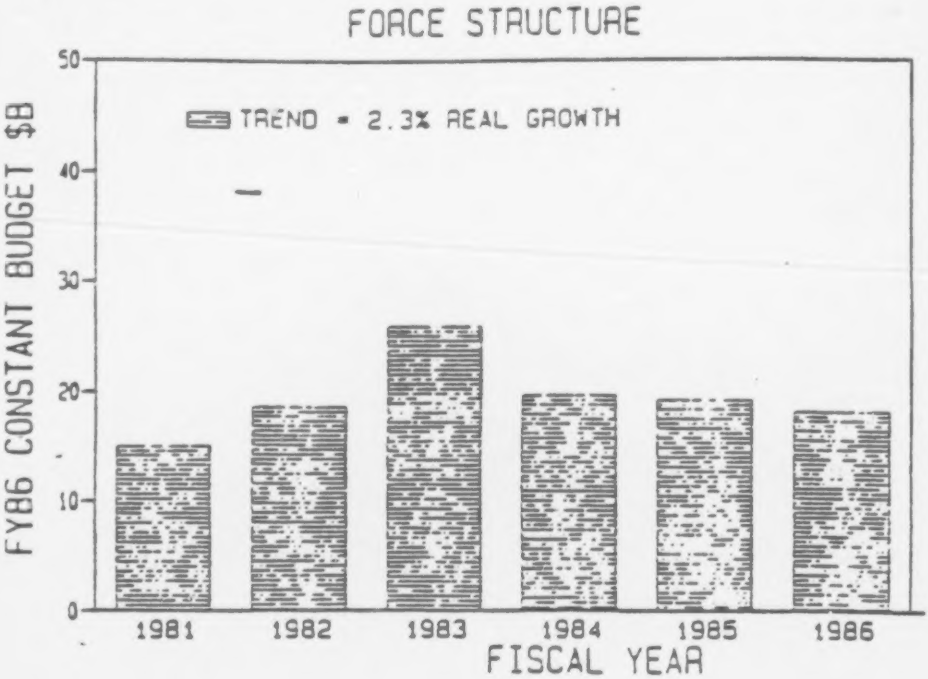
The FY-1986 funding for flying hours represents a 5.6 percent increase over the FY-1985 level, which will provide a level of 25 flying hours per month per air crew.

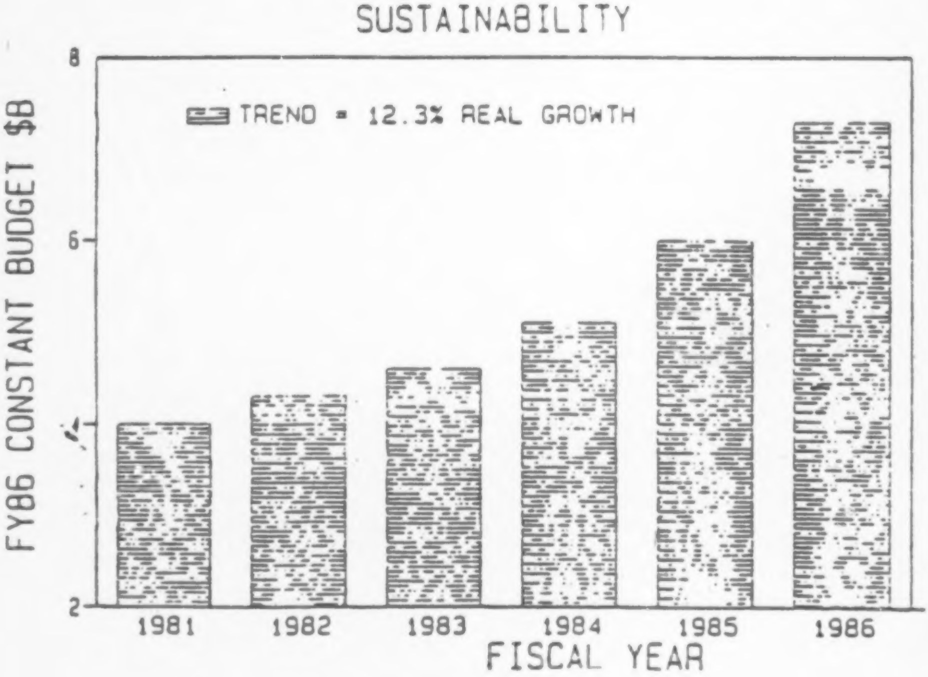
Ship steaming days are funded at the same rate as FY-1985, adjusted upward for the larger size of the fleet. This figure is based on the required steaming days to maintain readiness and training.

Aviation Support.—Planned procurement of Aviation Spare Parts (AVCAL), Aircraft Armament Equipment (AAE), Aviation Weapon Support Equipment (AWSE), and Ground Support Equipment (GSE) must be increased and is included in this budget to allow simultaneous deployment of all deployable aircraft carriers with full capability by 1987.

AMMUNITION

During the unilateral disarmament of the 70's, ammunition, missile, and torpedo stocks declined to such an extent that four years ago we could not load out the fleet even once. Funding for ammunition has doubled over the last three years and has doubled again in the FY-1986 and FY-1987 programs. The output to the fleet, however, will be much greater than a doubling of delivery rates because we have applied the management reforms outlined earlier. We intend, for example, to have second sources for virtually all requested surface-to-air and air-to-air missiles, ensuring that we will be able to sustain our steady buildup toward inventory requirements at the lowest possible cost. Full funding of these requests is essential if we are to maintain the efficiency and cost reductions we are now achieving through competition and production rates at optimum levels for lowest cost. At the currently funded rates we expect to achieve our full objective for wartime sustainability in these weapons systems by 1989.





COMMAND, CONTROL, AND COMMUNICATIONS C^3

Major investments in improving C^3 in the naval forces is included in this budget. The long-deferred development of anti-jam communications is a major initiative in this budget. In addition, funding is included for the E-6A TACAMO replacement aircraft.

SHIPBUILDING

The FY-1986 budget requests 23 new-construction ships, and 5 conversions and reactivations. In the FY-1986 budget we are now dealing largely with the modernization and maintenance of the 600 ship navy in the 90's, rather than force-building to that number, achieved during the last four years.

AIRCRAFT CARRIERS

There are no aircraft carriers in the FY-1986 budget or the five year projection, and no new construction carriers are needed until the early 90's. THEODORE ROOSEVELT (CVN-71) was launched in October 1984 and will become the fourteenth deployable carrier in 1986. ABRAHAM LINCOLN (CVN-72) will join the fleet in 1989 as the fifteenth deployable carrier, and GEORGE WASHINGTON (CVN-73) will replace CORAL SEA in 1991.

BATTLESHIPS

The FY-1986 budget contains long-lead funding for the reactivation of the fourth and final battleship, the USS WISCONSIN.

TRIDENT SUBMARINES

The FY-1986 budget contains funding for the thirteenth Trident submarine, which will have a Trident II D-5 missile configuration.

ATTACK SUBMARINES

The FY-1986 budget contains funding for four *Los Angeles*-class nuclear attack submarines. It is essential, now that we continue to have both Electric Boat and Newport News producing *Los Angeles* class submarines with great efficiency, that we take advantage of their capacity to produce the numbers required at substantial savings. We estimate that the difference between contracting for four 688's competitively and contracting for three competitively means a reduction in price of 40 million dollars for each of the four submarines.

AEGIS CRUISERS

The FY-1986 budget contains funding for three Aegis cruisers, the seventeenth, eighteenth, and nineteenth of the class. These ships will be competed on a fixed-price basis for the third straight year between Bath Iron Works and Litton.

DESTROYERS

The FY-1986 budget contains long-lead funding for the *Arleigh Burke*-class destroyers. The lead ship was appropriated last year and we expect to begin competitive series production in two shipyards in FY-1987 and bring in a third yard in FY-1988. These ships are not force-builders, but will replace existing DDG-2 and DDG-37-class destroyers on a one-for-one basis.

AMPHIBIOUS SHIPS AND LANDING CRAFT

Four years ago we embarked on a program to expand our Marine amphibious lift capability to add assault lift for one Marine Amphibious Brigade. That program is progressing very nicely. All of these ships will incorporate design features to operate the new generation of Marine Corps equipment, such as the CH-53E, the V-22 OSPREY (formerly the JVX), the AV-8B Harrier, the LCAC, and the complete new suite of armor, artillery, and infantry equipment now entering the Marine Corps inventory.

LSD-41

The FY-1986 budget contains two LSD-41 *Whidbey Island* class ships, the seventh and eighth of the class. These will be awarded on a fixed-price basis.

LHD-1

The FY-1986 budget contains the request for the first ship of a three-ship multiyear procurement of the new WASP-class convertible amphibious V-STOL carrier. Using the lessons learned from the achievements of the multi-ship carrier procurement of 1983, we project savings of more than $820 million in this three-ship procurement.

LCAC

The FY-1986 budget requests twelve more of the Landing Craft Air Cushion (LCAC) now being produced by Bell Aerospace Textron. A second-source contractor will be selected this Spring. Competitive production by two shipbuilders begins in FY-1986. This is the most revolutionary enhancement of landing craft in Marine history.

MINE COUNTERMEASURE SHIPS

The reconstitution of our mine warfare capability is now in full swing. For FY-1986 we are requesting authorization and funding for four MCM-1 *Avenger* class mine countermeasure ships and four small, less expensive, MSH-1 coastal mine hunters. Bell Aerospace Textron of New Orleans won the competition for the production of this new class of ship based on the revolutionary surface effect design. The reserve-manned craft of opportunity (COOP) program for FY-1986 converts four fishing vessels and two former Naval Academy training craft for use in designated Atlantic and Gulf ports.

SUPPORT SHIPS

The FY-1986 budget contains funding for two more oilers (T-AO) and two more ocean surveillance ships (T-AGOS). These four ships will be awarded through fixed-price competition.

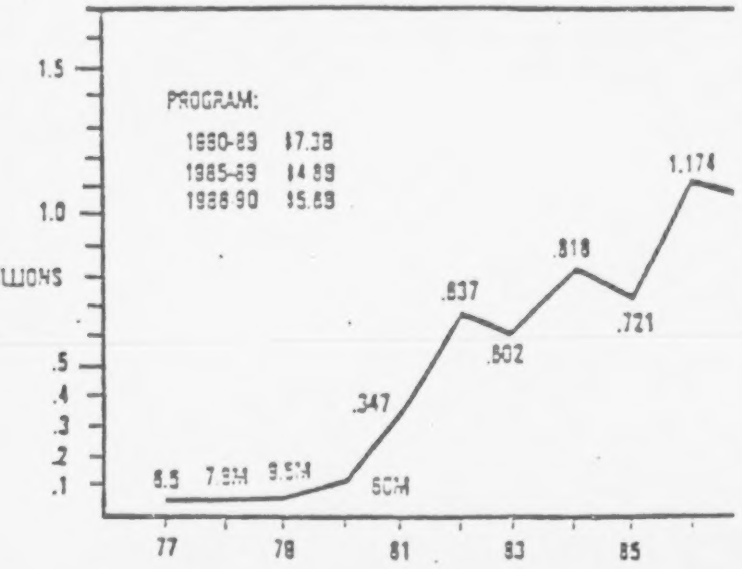
SEA LIFT AND MARITIME PRE-POSITIONING

Our budgets for the last four years have included significantly more money for strategic sea lift than all previous budgets going back to World War II put together. The FY-1986 budget continues that momentum with funding requested for the conversion of three more auxiliary crane ships (T-ACS) and additional flat racks and sea sheds. We have now had such success with our program to grow the Ready Reserve Fleet from 32 to 77 ships, having recently procured 11 modern RO-RO and break-bulk ships, sufficient to lift an entire Army Armored division, for $83 million, that we are expanding our objective to achieve 100 dry-cargo ships, plus additional bulk oil carriers.

STRATEGIC SEALIFT FUNDING

TOTAL PROGRAM ($ BILLIONS)

AS OF 01 JANUARY 1985



NAVY AND MARINE CORPS AIRCRAFT PROCUREMENT AND MODERNIZATION PROGRAMS

The FY-1986 budget request contains 322 new Navy and Marine aircraft. This will build to an active inventory of 5700 aircraft, with roughly a third of these operated by the Marine Corps. The fourteenth active air wing is planned for FY-1987 and the two reserve air wings are currently modernizing a part of our horizontal intigration.

TACTICAL AIRCRAFT MODERNIZATION

The FY-1986 budget proceeds with one of the most dramatic changes in TACAIR modernization policy. To get the maximum value for the taxpayer we have adopted a product improvement approach based on firm-fixed price development contracting. The major objective of this approach is to establish hardware and software commonality in our four major tactical aircraft programs, with the objective of obtaining 90 percent commonality in avionics and electronics for the AV-8B, F/A-18, A-6 and F-14. This will save at least $4 billion over the remainder of this decade.

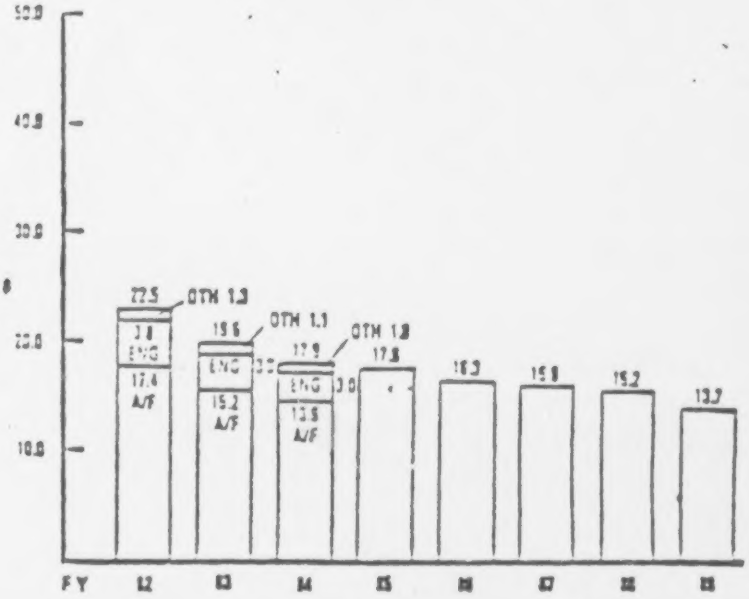
F-14 TOMCAT FIGHTERS

We have been able to maintain stability in the F-14A production rate that, along with discipline management, has brought about actual cost reductions in the airplanes. Unfortunately, the imposition of budget cuts on the President's request of last year has forced the Navy to reduce its requests from 24 F-14s to 18 F-14s and this will result in a price increase because of the lower rate of production. Our funding request includes funds to shift production aircraft from the TF-30 engine to the F-110 engine selected competitively by the Air Force. In addition, funding is included to execute the remarkable firm-fixed-price contract signed last year for the full package development and pilot production of the F-14D. This airplane will include entirely new engines, avionics, survivability features and radar upgrades. First production of the F-14D is planned for FY-1988.

F/A-18 HORNET STRIKE FIGHTER

For the fourth straight year we are requesting 84 F/A-18 aircraft. Because of the success of competing this airplane against the F-14 and the A-6E and because of very good performance by the contractors, we have brought the price of the F/A-18 down significantly every year. Its first deployment aboard CONSTELLATION is now underway and it is still breaking all records for reliability and maintainability. The fiscal year 1986 budget includes funding for the development of an austere all-weather two seat version of the F/A-18A.

F/A-18
RECURRING FLYAWAY UNIT COST
FY82 $ IN MILLIONS



A-6 INTRUDER ALL-WEATHER ATTACK

The A-6E continues to prove that it is the best all-weather precision bomber in the world. Based on the inputs of the joint and fleet CinCs, we have had to increase the requirement for the number of A-6Es on carrier air wings. As a result, we have a significant current shortfall of A-6 aircraft which will grow worse in the years ahead. This problem has been exacerbated by our recent discovery that fatigue life on the A-6E wing will not exceed the contract specification. While all A-6Es are meeting or exceeding to some extent the design specification for wing life, it had been hoped that wing life could be extended as much as 100 percent. That is not possible. We are therefore entering into a competition for the design, production, and installation of a wing for all A-6s designed to last the entire duration of the service life of the aircraft.

Funding is included in this year's budget for the continuation of the firm-fixed-price contract signed last year for the development of a completely modernized A-6F. This aircraft will incorporate the F-404 engines, avionics, and survivability features of the F/A-18 and will include a new state of the art dual-mode radar. First production of the A-6F begins in FY-1988.

AV-8B

The AV-8B has successfully completed its Phase I OPEVAL and we have now signed our second firm-fixed-price contract 8 percent below budget estimates. The FY-1986 budget includes funding for 46 aircraft.

CH-53E

Funding is requested for 14 CH-53E heavy lift helicopters to begin the first year of a 4 year multi-year procurement that will save 102.9 million dollars. Introduction of this aircraft has been highly successful.

SH-60

The SH-60 LAMPS III helicopter is now in full production. We have executed a firm-fixed-price contract for the fiscal year 1985 aircraft at 15.7 percent below the budget. The FY-1986 budget contains funding for 18 aircraft.

SH-2F LAMPS I HELICOPTER

The SH-2F LAMPS I helicopter has been a most successful example of sound business management in reopening a production line that has been closed for 15 years. The FY-1985 contract for six LAMPS will be on a firm-fixed-price basis at less than budget. This excellent light-weight helicopter provides extremely valuable capabilities to those ships that will not be modified to operate the LAMPS III helicopters, primarily the FF-1052 class and FFG-7 class, and will modernize of the Naval Reserve.

AH-1T

The OPEVAL of the AH-1T, reengined with the T-700 engine was very successful and it is our intention to incorporate this engine into the FY-1985 production aircraft. The FY-1986 program contains funding for the final 22 aircraft of a 44-aircraft program.

CV HELICOPTER

The FY-1986 budget contains funding to complete development of a helicopter to replace the carrier-based SH-3. This program embodies both CV search and rescue requirements and the dipping sonar anti-submarine warfare requirement which is becoming more important in dealing with the Soviet submarine threat. This aircraft will be an austere modification of the existing production SH-60 aircraft.

V-22 OSPREY

The FY-1986 budget contains funding for the continued development of this revolutionary aircraft, formerly known as JVX, now shifted entirely to the Department of the Navy budget for development and production for all the services. One of the most innovative and exciting new aircraft developments programs in the world, the program is on schedule and on cost. It will replace the aging CH-46E's and CH-53A/Ds in the Navy and Marine Corps inventory. In addition, modification of this aircraft will be applied to many other missions in all of the services. We are including from the inception of this program the establishment of two production lines to compete annual production buys in the future.

ADVERSARY AIRCRAFT

The Navy takes delivery of its first no-cost lease of F-21 Kfir aircraft from Israel in March. This interim aircraft will provide excellent adversary training until and beyond the delivery of the F-16N aircraft to Navy adversary squadrons. The F-16 was selected in December of 1984 in a fixed-price competition and we have signed a contract for 14 aircraft based on prior year funding. The FY-1986 budget includes funding for 12 aircraft.

OTHER AIRCRAFT

The FY-1986 budget includes funding for twelve utility aircraft, 8 C-2s and 38 T-34C trainer aircraft. The C-2 has been an extremely successful multi-year contract now yielding more than 100 million dollars in cost savings.

MARINE CORPS PROCUREMENT PROGRAMS

MARITIME PRE-POSITIONING SHIP (MPS) BRIGADE EQUIPMENT

Funding is requested in FY-1986 for the third MPS Brigade and to continue equipment maintenance, modernization, and exercise funding for the first and second MPS Brigade. The second MPS squadron will replace the near-term pre-positioning force (NTPF) ships during FY-1986, and funding is requested to effect the transfer of equipment and supplies.

NORWAY PRE-POSITIONING

The Marine Corps program for pre-positioning selected equipment and supplies in Norway allows a Marine Amphibious Brigade (MAB) to move from the United States to the critical northern flank of NATO in days, with a minimum requirement for strategic lift.

M-198 HOWITZER AND SELF-PROPELLED ARTILLERY

The FY-1986 budget contains continued funding for the M-198 to complete replacement of our aging towed artillery pieces with a weapon of significantly greater range, reliability, maintainability, and lethality. Thirty-five are requested in fiscal year 1986.

INFANTRY WEAPONS AND OTHER HIGH PRIORITY PROGRAMS

FY-1986 budget contains continued funding for the fielding of infantry weapons to Marine Corps units, especially the new M-16A2 (the best service rifle in the world), the M-249 squad automatic weapon (SAW), the lightweight M-60E3 machine gun, and the shoulder-launched multi-purpose assault weapon (SMAW), an 83 millimeter rocket launcher.

ASSAULT VEHICLE LAUNCHED BRIDGE

This program will eliminate critical shortfalls in our assault river crossing capability. Sixteen are requested in fiscal year 1986.

OCEANOGRAPHY PROGRAMS

Knowledge of the ocean environment is critical to tactical and strategic force employment. We are now at the threshold of a new era which has the potential for offering explosive growth in our understanding of the ocean. We are taking advantage of this technological opportunity by:

(1) reinvigorating the oceanography designator as an elite corps.

(2) investing in more capable equipment such as the Navy Remote Ocean Sensing System (NROSS) and in oceanographic research vessels.

(3) establishing an Institute for Naval Oceanography to provide the means to integrate newly emerging data from satellite and other varied sources so that it can be readily disseminated to our fleet, and

(4) increasing our educational commitment within the military and civilian oceanography community.

We have increased substantially the number of graduate fellowships in ocean sciences for naval personnel, increased the number of academic chairs in oceanography, and strengthened the ocean sciences technology base. Our FY-1986 commitment in the technology base has been increased by approximately 10 percent to $110 million. The Navy Remote Ocean Sensing System will allow us to acquire global ocean data for operational and research use by both the military and civilian sectors. Our revitalization of ocean research vessels started in FY-1985 with the procurement of two new deep-survey platforms. Follow-on shipbuilding efforts are planned beginning in FY-1987. The Institute of Naval Oceanography will use a large-scale computer to closely link universities, research institutions, and the Navy in assimilation and use of ocean data from all sources.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION PROGRAMS

The FY-1986 request for RDT&E represents 10.8 percent of the Navy's total request. It represents the accomplishment of the pledge made four years ago to streamline and reduce the number of R&D programs and increase the funding where there is high payoff. We have reduced from well over 500 RDT&E programs in FY-1981 to 400 in the FY-1986 budget. A significant proportion of the entire budget is devoted to programs currently transitioning to full scale development, including the Trident II D-5 missile, the F-14D and A-6F, E-2C and EA-6A and B aircraft upgrade programs. Also of significance are the continuation of the Submarine Advanced Combat System (SUBACS), the MK-50 Advanced Lightweight Torpedo, the MK-48 ADCAP Torpedo, and the Joint Tactical Information Distribution System (JTIDS).

SSN-21

Continued R&D funds are required for this extremely important new submarine designed to counter Soviet threats in the full range of expected missions well into the twenty-first century. SSN-21 will be quieter, faster, deeper diving, more heavily armed, and more capable of under-ice operations than today's attack submarines. Authorization for the first ship is planned for 1989.

ADVANCED TACTICAL AIRCRAFT (ATA)

The FY-1986 budget includes research and development funding for this follow-on aircraft, intended to replace the A-6 and other aircraft in the late 90's. To ensure maximum commonality with developments in Air Force and Army Programs, we have set up a multi-service steering group.

SPACE

With three-quarters of the Earth's surface covered by the seas, the Navy has always had a priority interest in the maritime dimension of space. Naval operations are increasingly dependent on space systems strategically, tactically, and in peacetime. Nearly 85 percent of all operational satellite system outputs provided to the Armed Forces are used by the Navy. The coordination of military service and civilian agency activities in space has been remarkably smooth and successful. The establishment of the Navy Space Command in Dahlgren, Virginia, in 1983, has greatly improved the management focus of Navy efforts in space.

NAVY AND MARINE CORPS RESERVE

Four years ago the Department of the Navy undertook a major reorganization of reserve components to move from a vertical to a horizontal relationship with the active forces. That means essentially that the Reserves must provide immediate augmentation to the active force in time of emergency across the entire spectrum of warfare. It means also that, in peacetime, we rely on Selected Reserves to provide real-time fleet support across their mission areas. To execute this common-sense policy, the Reserves must have equipment compatible with the active forces. For instance, instead of providing the Reserves only such equipment as becomes obsolete and is removed from the active force, there must be a spectrum of new and old equipment reflected in the Reserves parallel and in the same proportion as in the active force. We have taken fundamental steps to bring this about.

Modern FF-1052 and FFG-7 frigates have been transferred to the Naval Reserve Force with a total program of 26 frigates planned by 1990.

The first reserve squadron has now transitioned to the F/A-18 and another squadron to the F-14A.

Modern A-7E, E-2C, SH-2F, and HH-60 aircraft have been or are being transferred or acquired for reserve units this year with other fleet aircraft to follow during the current five-year-plan.

Squadron augmentation flying units have been established and have been operating successfully with each active duty air wing, providing current trained aviators and maintenance personnel for immediate augmentation to active duty squadrons.

The Naval Reserve contains several components which only exist in the Reserves: 100 percent of the Navy's U.S. based logistic airlift squadrons; 100 percent of light attack helicopter squadrons; 100 percent of our combat helicopter search and rescue capability; 100 percent of naval mobile inshore/undersea warfare units—"the brown water Navy" structured for combat on inland waterways. Upon mobilization the Reserves provide 99 percent of naval control of shipping organization manning for merchant ship mobilization and convoy formation for overseas operations; 86 percent of ocean-going mine sweepers; 86 percent of cargo handling battalions vital to port management and loading operations in a combat theater; 85 percent of Military Sealift Command military personnel; 68 percent of Navy Mobile Construction Battalions, the famed SEABEES; 66 percent of special boat forces; 34 percent of Naval Intelligence personnel; 35 percent of maritime anti-submarine warfare patrol squadrons; 30 percent of medical support personnel; 22 percent of ASW Helicopter Squadrons needed for fleet and convoy anti-submarine defense efforts; and 14 percent of our tactical sea based aviation capabilities.

The Marine Corps relies heavily on a fully trained and capable reserve component to complement its active force. The Marine Corps division/wing team (the 4th Marine Division/Aircraft Wing Team) comprises one-fourth of our total Marine Corps combat structure and one-third of total Marine Corps manpower assets. The reserves provide 40 percent of Marine tanks; 33 percent of heavy artillery; 30 percent of the light attack aircraft; and 33 percent of the anti-aircraft missile capability. It is not often realized how fully integrated our Navy and Marine Corps Reserves are becoming in our active force structure and peacetime operations. Naval Reserve C-9 Transport aircraft made many trips in support of our Marines ashore in Beirut during 1983 and 1984 and provided direct support to our operations in Grenada during the same period.

As another example, the Ready Reserve provided 349 volunteers for three-week tours of duty aboard the battleship NEW JERSEY during its 11 month deployment, enabling most of the crew to rotate home for leave.

A most successful new initiative begun in 1983 was the Sea/Air Mariner Program that now provides 10,000 first term enlistments per year directly into the Naval Reserve. We are beginning a similar program this year for junior officer accessions directly into the reserves in both the Navy and the Marine Corps.

CONCLUSION

The progress outlined above and the programs proposed for the future should be a source of much pride to this committee and to Congress as a whole. It is strong testimony to the proposition that Congress and the Executive Branch not only can work together, they can achieve dramatic results in a very short period of time. In four short years we have made a real change already in the global maritime balance. We have increased available ship days 40 percent for submarines and 20 percent for surface combatants. No longer do we have a 1½ ocean Navy for a 3 ocean commitment; no longer do we have ships that cannot deploy on time for lack of trained sailors; no longer do we have a hemorrhage of talent from our career forces; no longer do we have an unending spiral of cost overruns and escalation; no longer does the world perceive the United States as declining a world power. The modest 7 percent average increase in the Navy budget for the last four years has paid enormous dividends and provided capabilities many times more than that increment.

The President, the Secretary of Defense, and the Department of the Navy have not wavered from the priorities and commitments made four years ago to achieve maritime superiority. We have every confidence that Congress will demonstrate the same constancy of purpose, rejecting the arguments of those who would ignore the lessons of the 70's. We simply cannot afford to start again down that road of no-growth budgets, pay freezes, and the destruction of competition, which brings us ultimately to the dead end of an impaired national security.

Today, we hear once again the popular but false wisdom that in a period of high interest rates and deficits, the defense budget simply must be cut. Sometimes this pernicious reasoning is even carried one step further and it is alleged that the build-up of America's military strength is actually weakening the United States' economy.

History itself is the best refutation to the argument that budget deficits necessitate a cut in defense expenditures. Today's economic problems do not even approach the era of the recent depression, when the British, French, and U.S. governments cut military expenditure to the bone in the name of fiscal prudence. The resulting lack of Western preparedness contributed in no small measure to World War II, the war Churchill called the most avoidable of all wars.

When the Axis powers were finally defeated in 1945, 60 milion people had died, almost 300,000 of them Americans. The war consumed nearly 40 percent of the U.S. Gross National Product. If World War II were to be fought again, at 1985 prices, the price would exceed 4 trillion dollars.

Those who would argue that defense spending should be curtailed in times of deficit should ponder the cost of war itself, should deterrence fail for want of adequate preparedness. A significant portion of today's federal debt represents the unpaid bills, with interest, that we still owe on World War II. Our war debt has never been liquidated, only rolled over. Funded for the most part by 30 year 2½ percent war bonds, the principal remains unamortized today at much higher interest rates. Strong national defense does not come cheaply, but as we learned four decades ago, it is far less expensive than the war which weakness invites.

Another specious rationale maintains that "the biggest deterrent to the Russians is a healthy economy in America." It is doubtful that the Politburo will defer to foster revolution and turmoil in Central America because the U.S. trade balance is improving or economic productivity is rising.

We are fortunate to have in the President and Secretary of Defense and in positions of responsibility in Congress, leaders who understand the truly incalculable cost of war in terms of human sorrow and suffering. They recognize that, above all others, national defense is the first and most vital of all government services. For if the people, through their government, cannot "provide for the common defense," we can provide for nothing else.

Chairman GOLDWATER. Thank you, Mr. Secretary.
Admiral Watkins.

STATEMENT OF ADM. JAMES D. WATKINS, CHIEF OF NAVAL OPERATIONS, U.S. NAVY

OVERVIEW

Admiral WATKINS. Thank you, Mr. Chairman and members.

To amplify a bit on the Secretary's statement, I would like to comment on a few things. As for people, our Navy is better manned, more experienced, and more spirited than any time I have seen in the past 36 years. Retention is more than twice what it was 4 years ago, at unprecedented highs. Recruiting goals have been met for 5 straight years, with exceptionally high quality people. Desertion rates, attrition rates, all of the negatives, cut significantly, and trends still going negative, in the right direction.

DRUG ABUSE

Drug abuse is less than a quarter of what it was just 4 years ago. We have it under control, far more than the private sector. We are proud of our accomplishments in that area.

STRUCTURE AND MODERNIZATION

As for the battle force structure and modernization, instead of 479 deployable battle force ships to accomplish the increased worldwide commitments, we now have 523. Much is demanded of us. We have not cut our optempo. It is a more unstable world, and fortunately we have these forces to dispatch as the President needs to around the world.

600 SHIP FUNDING/IMPROVEMENTS

Funds are in hand for the 600-ship Navy. Many said we could not do it. The kind of management techniques mentioned by the Secretary have permitted this Nation to have 600 ships and to be able to fund it with reasonable growth figures.

Planned improvements are not just in quantity. For while increasing the size, we retired more than 50 World War II technology ships. The Navy has become younger, with high technology systems providing the capabilities to meet today's sophisticated threat worldwide, which is not confined solely to the Soviet Union.

NEW EQUIPMENT

We have introduced new aircraft, such as the F/A-18, which is now establishing record-breaking performance, despite many of the negatives that were said about it a few years ago. It has a safety rate eight times better than the F-4, four times better than the F-14, while requiring only half the maintenance man-hours per flight hour—better than we predicted.

New weapons at sea, such as the multivariant Tomahawk, are increasing the long-sought combat distributed capability of the fleet. Tomahawk alone distributes our surface combatant and submarine power over an area of 30 times that which was covered by earlier weapons which really complicates an enemy's targeting ability.

SEALIFT

As for strategic sealift, at $1 billion per year investment, we have more than doubled our capability in this Nation between 1981 and 1985 and it will triple 1981 capability by the end of this fiscal year. The Navy's 5-year defense plan now fully supports all services' needs by decade's end. The Navy has formally established strategic sealift just this past year as one of its three prime mission requirements—long overdue. We are now supporting the Army, which I will admit we were deficient in during past years.

SUSTAINABILITY

Despite weapon modernization, we have not neglected sustainability. Although inventories lag spending by about 2 years due to manufacture and delivery times, stocks of high technology missiles, torpedos and the like have already doubled inventories of 4 years ago, and will double again by the end of this decade. This was the initial objective set for the 600-ship Navy, to have the sustainability and the staying power to be a credible deterrent. Spare parts bins are filling, and as a result, as the Secretary mentioned, we have combat availability of ships and front line aircraft now up more than 40 to 50 percent since 1980.

These are a few of the examples that I have taken out of the more lengthy posture statement, which you have kindly allowed to be entered into the record. I must say that we have been able to achieve these only because of the very tough, responsible management actions spearheaded by the Secretary of the Navy. They have been impressive and since he recounted to you many of the achievements in that regard, I will not repeat them here now.

REAL GROWTH

So, as anticipated, we can now shift from the urgent recovery phase, in which from fiscal year 1981 to 1983 we averaged 12.3 percent real growth, to a sustaining period of about 4.5 percent real growth, down 2 percent from last year's appropriated funding levels. We can focus on completing the job well started earlier and at reasonable cost growth levels.

The 600-ship Navy is in hand. Our goal now is to bring the remaining ships, the aircraft, and the people on line and see that they are fully ready. Our budget does just that.

MARITIME STRATEGY

Finally, it is important to point out that in our opinion, our authorization request fits well within a structured maritime strategy. Many members of this committee have been briefed on that strategy recently. We think it is cohesive and fits precisely into the larger national strategic context.

It is an outgrowth of national security directives, the resultant national military strategy as laid down in the Secretary of Defense's Guidance and as reflected in approved Joint Chiefs of Staff plans and contingency plans of unified commanders. It is not a Navy strategy; it is a national strategy under a well-ordered structure.

It relates not only to the Soviet threat but to other potential national security threats as well. It is dynamic, and sensitive to lessons learned from real world events, to carefully structured joint and allied exercises, and to sophisticated war games.

It is a joint strategy dovetailed with our sister services and allies. Careful review of the strategy and our own projected forces and capabilities lead to the conclusion that although the Soviets have nearly a 3-to-1 numerical advantage over our Navy we and our allies can deter and prevail, if necessary, provided we sustain the momentum you have given us in recent years. Our budget submission seeks your support to do just that and no more.

Thank you, Mr. Chairman.

[The prepared statement of Admiral Watkins follows:]

REPORT BY ADM. JAMES D. WATKINS, U.S. NAVY, CHIEF OF NAVAL OPERATIONS

POSTURE STATEMENT

Mr. Chairman and distinguished members of the committee, I am grateful for the opportunity to appear before you today to report on the status of our Navy. It is the finest Navy in the world and more capable of fulfilling our national security objectives than at any time during my 40 years of service. This capability has never been more crucial, for the challenges to peace have never been more complex and demanding. We must contend with threats which range from low level conflict and terrorism to strategic nuclear war. There is no indication this situation will improve in the forseeable future.

Four years of Congressional and public backing have indeed made a remarkable difference. Our posture has improved dramatically over the past few years. In 1980 we had 479 ships in the fleet and were barely able to meet our peacetime commitments. Deficiencies in readiness prevented some ships from operating at all. In just four years we have added 44 ships to the fleet and readiness has improved markedly. Stocks of munitions, spare parts, and other essentials of sustainability continue to approach desired levels.

But of all the elements that constitute the Navy's enhanced posture, none is more important than the character of the men and women who serve. Our sailors today exhibit a renewed spirit and vigor that forms the cornerstone of renewed naval strength. Like their fellow countrymen, Navy men and women feel good about being Americans and reflect a patriotism and deep sense of commitment to country which is truly inspiring. Over the past several years, programs to rebuild a once mislaid sense of pride and professional competence have paid off handsomely and have been complemented by the patriotic spirit which I described. We have set exacting standards and demanded a great deal of our sailors, and they have responded magnificently. The U.S. Navy is the finest in the world because its sailors are the finest. They are proud of their country and their profession; they are good at what they do; they are dedicated and self-sacrificing. They deserve your support.

Revived patriotism alone does not recruit and retain sailors. The Navy's personnel picture is sound today, but a growing economy increasingly competes for the talented people we need. America's young people, perhaps more than ever, demand the opportunity for upward mobility and economic advancement, and if they do not find it in the Armed Services, they will seek it elsewhere. Already, we sense disturbing trend indicators on the horizon. Providing continued support for military pay and benefits programs is one of the most important budgetary issues we face this year.

Before addressing budget issues, however, I will review the Navy's key role in support of national security policy, focusing on the nature of the "violent peace" we face and the unique contribution of naval forces in controlling crises and deterring conflict across the entire spectrum of violence. I also will describe certain naval operations and exercises over the past year, vivid examples of these unique contributions. The Navy was at sea in large numbers every day of the year in support of U.S. policy and military strategy of deterrence. We tested plans to keep America free and at peace in wargames, exercises, and actual operations. Finally, I want to discuss some key issues facing the Navy today and describe in detail plans to apply the resources you provide.

Today's capable Navy would not have been possible without strong Congressional support. Your continuing support is necessary to sustain progress. I want to make special note of how keenly we recognize our obligation to be responsible stewards of resources you provide. I think it will be clear that America's commitment to a stronger defense is well founded and well managed. Increased funding has produced tangible results, and your continuing confidence and support are warranted.

NATURE OF THE CHALLENGE: AN ERA OF VIOLENT PEACE

United States national security policy is designed to preserve freedom, with institutions and values intact. We are a global power with global interests and obligations. We live in a world with manifold threats to U.S. interests and must deal with a wide range of threats to freedom. Earlier, I mentioned the continuum of threats from low-level violence to nuclear war, from terrorism to major conventional conflict. At the upper end of the spectrum, demarcations between peace and war are clear, and America today is at peace. But at the lower end of the continuum, differences between war and peace are blurred. Our forces deployed in their traditional roles of presence and crisis response live daily with the threat and reality of violence from a variety of sources. America is at peace, but it is a violent peace.

A principal feature of this era is the continuing and widespread existence of localized conflicts and crises, mostly in the Third World, but often with global implications. This past year alone, millions of people were involved in over 30 armed conflicts throughout the world. These ran the gamut from civil unrest in Sri Lanka, to insurgencies in Central and South America, to civil war in Chad, to direct conflict between states in the Persian Gulf.

These conflicts, and a number of other crises with the potential for armed conflict, frequently involve interests and commitments of major world powers. These confrontations often transcend interests of states directly involved and serve as backdrop for potentially more serious conflicts between major powers. Indeed, a fundamental component of the Navy's ability to deter war with the Soviet Union is our ability to stabilize and control escalation in Third World crises.

The profusion of crises and conflicts has been a feature of the international environment since World War II. Potential crises and the aftermath of crises have increasingly defined the location and character of our forward deployments. We now maintain a continual presence in the Indian Ocean, Persian Gulf, and Caribbean, as well as our more traditional forward deployments to the Mediterranean and the Western Pacific. Although technically we are at peace, our operating tempo is about 20 percent higher than during the Vietnam War. The Navy is on the front lines of today's violent peace, and I see little likelihood of significant improvement in the foreseeable future.

The causes of today's conflicts and crises are almost as numerous as the conflicts themselves. Many, unfortunately, are rooted in ancient and unresolved hostilities between religious, ethnic, and social groups. Others are caused or exacerbated by economic and attendant political instability, as well as actions of totalitarian and aggressive governments. Despite efforts of dedicated and skilled negotiators, crises and conflicts probably will continue.

While not always the principal cause of these conflicts, the Soviets frequently exploit instability in the Third World to promote creation of Marxist governments, improve their strategic position, and reduce Western influence. Soviet methods have included indirect support and encouragement of limited warfare by Cuban, Syrian, Libyan, and North Korean proxies as well as direct Soviet crisis response by their own forces. Since 1948, the Third World has been the most common arena for U.S.-Soviet competition. This pattern, too, will continue. U.S. interests and commitments are worldwide, and increasingly focus on the Third World. Our economy and security require not only oil from the Persian Gulf and Caribbean, but strategic minerals from southern Africa. Our trade with nations of the Pacific Basin now exceeds that with Europe. Obviously, we have vital stakes in what happens in these and other key areas.

In this era of violent peace, traditional challenges to peace and stability which I just reviewed have been compounded by several trends including increased Soviet capabilities for global military reach, a proliferation of modern weaponry in the Third World, and the rise of international terrorism. I would like to address these complications.

The Soviets have steadily built a capacity for global military reach. Their military airlift has gradually increased. Sealift has grown substantially with addition of modern amphibious shipping plus dramatic expansion of the Soviet merchant fleet. The Soviet Navy, with V/STOL carriers today and a large-deck nuclear powered carrier under construction, is increasingly capable of sustained distant operations. Additionally, the Soviets have continued to expand and improve their attack submarine force, making it a formidable, global threat. They also have enhanced their global reach by access to air and naval facilities in key strategic locations, including Ethiopia, Yemen, Cuba, and Vietnam.

Most importantly in this regard, Moscow has recently established its first fully developed overseas base at Cam Ranh Bay, Vietnam. Those facilities can now independently support a large concentration of Soviet naval forces, maintaining a permanent naval force astride key sea lanes to our Pacific allies and friends. Cam Ranh Bay forces can strike key U.S. and friendly forces and installations as far north as Hong Kong. These changes in Soviet military reach have occurred in a region where Moscow's presence was negligible only two years ago.

Improved power projection forces and global access provide the Soviets a growing capability to intervene militarily in the Third World. They steadily improve their ability to sever vital Sea Lines of Communication (SLOCs) while improving their ability to counter U.S. crisis reaction moves. U.S. naval forces deployed to areas of crisis often find themselves in company with increasingly capable units of the Soviet Navy. Responding effectively to Third World crises may well require that U.S. Navy units bring the range of capabilities necessary to deal with Soviet as well as Third World threats.

The continuing proliferation of modern, high-technology weaponry further complicates Third World instability. Certainly the most alarming aspect of this proliferation is the growing number of nations in a position to acquire weapons of mass annihilation -- chemical, biological, even nuclear. Even in the absence of such weapons, impressive conventional arsenals possessed by Third World nations pose an immediate concern; Libya is a case in point. While these weapons do not fundamentally change the causes of instability in the Third World, they do change the nature of conflict and the threats we face. Naval forces must be prepared to encounter high technology, combined arms threats in virtually every ocean of the world.

The rise of state sponsored terrorism has created a new and most disturbing element of violent peace. Although we are at war with no nation, various groups have proven themselves ready to strike at us and other free nations with murderous effect. Terrorism's unpredictability, worldwide scope and anonymity render it one of the most insidious threats we face today. Terrorism is not new, but the threat has increased because terrorism has become a preferred arm of state action in some cases. Evidence exists that several nations sponsor terrorist training camps on their soil and send forth agents of murder and destruction as an element of national policy.

The significance of terrorism lies not only in the fact that it takes innocent lives, but also that it is yet another point on a broad continuum of conflict. International terrorism threatens our forward defense. Placing at risk our forward deployed forces, terrorists seek to paralyze our employment of these forces, undermine our commitments abroad, and intimidate us into withdrawing.

This brief survey of the world scene is by no means comprehensive, rather it highlights two important developments which the Navy faces everyday in our forward deployed role: terrorism and an era of violent peace. In facing these challenges, we contribute in a significant and unique way to deterrence at all levels of the continuum of conflict.

ROLE OF THE NAVY -- DEMONSTRATED DETERRENT VALUE

The fundamental task of U.S. military forces is to deter war and preserve peace. Hence, our strategy is based on deterrence, forward defense, and alliance solidarity. The Navy's demonstrated deterrent value across the entire continuum of potential conflicts is based on forward deployments and flexibility. Our maritime strategy recognizes and depends on close cooperation with allies and sister Services. These principles infuse every aspect of force structure, strategy, and operations.

Deterrence is most often associated with discussion of strategic nuclear warfare, where strategic submarines have proven to be a most credible deterrent for over two decades. Yet, deterrence is much broader. To protect national interests, we must deter threats ranging from terrorism to nuclear war. This requires a credible preventive and reactive capability at the level of conflict we seek to deter. Our national interests further require an extended deterrent capability. We must deter coercion and military attack not only against the U.S., but also against allies, trading partners, important resources, and U.S. interests and installations worldwide. Perhaps most importantly, protecting national interests while preventing war, particularly nuclear war, requires an ability to control escalation. We seek to deter a threat at a particular point on the spectrum of conflict, but when deterrence fails, we seek to control escalation.

Naval forces provide credible, capable deterrence at any level of potential conflict, exercise this capability worldwide in support of an extended deterrence posture, and provide precise and graduated responses necessary for escalation control. The evidence is a matter of record; the Navy, together with the Marine Corps, has played a central role in deterrence, and provided escalation control in an exceptional range of situations and at different levels of potential conflict.

The cornerstone of national security policy is nuclear deterrence and, at the strategic deterrence level, the Navy has provided a survivable submarine ballistic missile force. Today, as TRIDENT SSBN's enter the fleet in growing numbers, this element of deterrence increases in importance. The OHIO class submarine's ability to disappear in the world oceans, combined with the range and accuracy of the TRIDENT C-4 missile today and the D-5 in the near future, makes this force resistant to preemption and capable of assured and effective retaliation. These magnificent ships have shown consistently superb operational results.

The nuclear variant TOMAHAWK land attack missile - TLAM/N - complements the strategic deterrent of our SSBN force. Planned for surface ships and submarines, TLAM/N provides a significant new capability to deter escalation to nuclear war in any theater, as it possesses the inherent worldwide mobility and survivability of naval forces. In addition, it makes a major contribution to deterrence through its role in the theater nuclear reserve.

Another equally significant Navy contribution to deterrence lies outside the nuclear context, at the level of conventional conflict and crisis response. Every day, forward-deployed naval forces operate worldwide preventing onset of crisis or outbreak of hostilities which could threaten our global interests. When crises occur, naval forces limit and stabilize the crisis, discourage escalation, and deny any opportunities to Soviet or proxy forces.

The Navy plays a particularly important role in the event of a broad conventional conflict with the Soviet Union. Our alliances are ocean alliances, and the Navy's ability to maintain Sea Lines of Communication will ensure that the Soviets cannot partition the Allies and achieve a quick victory. Moreover, striking power of forward deployed naval forces will be essential to controlling escalation and terminating conflict on terms favorable to the U.S.

Crisis response has long been the business of the Navy and Marine Corps. Between 1946 and 1982, in some 250 instances of employment of American military forces, naval forces were used about 80 percent of the time. Reasons for selecting naval forces as the instrument of choice for crisis management and deterrence of conflicts are illuminating:

- Forward-deployed posture and rapid mobility make naval forces rapidly available at crisis locations worldwide, providing significant deterrent value and reducing the likelihood of ambiguous or short warning.

- Naval forces maintain consistently high states of readiness due to forward deployments, ensuring operational expertise and day-to-day preparedness.

- Naval forces increasingly operate with armed forces of our friends and allies. We now routinely operate with our sister Services in joint operations and exercises.

- Naval forces can be sustained indefinitely at distant locations, with logistics support relatively independent of foreign basing or overflight rights.

- Naval forces bring the range of capabilities required for a credible deterrent. Capabilities demonstrated in actual crises include maintaining presence, conducting surveillance, threatening the use of force, conducting naval gunfire or air strikes, landing Marines, evacuating civilians, establishing a blockade or quarantine, and preventing intervention by Soviet or other forces.

- Perhaps most importantly, naval forces have unique escalation control characteristics that contribute to effective crisis control. Naval forces can be intrusive or out of sight, threatening or nonthreatening, easily dispatched but just as easily withdrawn. The flexibility and precision available in employing naval forces provides important escalation control in any crisis, but has particular significance in crises which might involve the Soviet Union. The Navy remains keenly aware of its crucial role in this area and has devoted increasing attention to employment of naval forces in this capacity.

Our experience leads to the following observations:

- Deterrence requires forward-deployed forces, both for preventive and reactive reasons. Current commitments to extended deterrence and the potential range of crises require a balanced 600-ship Navy.

- Deterrence requires ready and sustainable forces, implying continued emphasis on our readiness and sustainability programs.

- Deterrence requires capabilities adequate to the threat. Increasing Soviet global reach and proliferation of modern weaponry demand the highly capable forces we are now building.

- Finally, deterrence requires an ability to cope with all levels of the conflict continuum including international terrorism.

In summary then, I reiterate my two principal themes:

- First, we live in an era of violent peace, characterized by a continuum of potential conflicts and violence.

- Second, the Navy operates in the front lines of this violent peace in our everyday, forward-deployed role worldwide, continuing to demonstrate deterrence across the spectrum of potential conflict.

NAVAL OPERATIONS

This past year provided clear examples of the challenges of an era of violent peace and the Navy's role in meeting those challenges. As the year dawned, turmoil in the mid-east continued to boil as conflict continued in Lebanon, the Iran-Iraq

War entered its fifth year, and terrorist attacks continued against Israel. Then came mining of the Red Sea last summer. In north Africa the Chad-Libya conflict continued sporadically. Unrest in Central America continued with open conflict in El Salvador. Unfortunately, this level of violence during peacetime has become so commonplace that we tend to overlook the potential for these events to escalate, spread, and lead to direct superpower confrontation. Fortunately, conflicts this past year did not bring the superpowers to a face-to-face confrontation and did not expand. The year ended without erosion of our global posture, and the Navy again played a key role in safeguarding U.S. and allied interests.

Deployment of the aircraft carrier INDEPENDENCE battle group and accompanying Marine Amphibious Ready Group (MARG) provides a recent and dramatic example of the flexibility and utility of naval forces in this period of violent peace. When the battle group and MARG steamed from Norfolk in the fall of 1983, they expected their first operation to be a Mediterranean exercise. But only a few days out of port, acting on the request of eastern Caribbean nations to move forces to the vicinity of Grenada, the National Command Authority transmitted a turn starboard signal. The Navy-Marine Corps team responded magnificently and was a key element in the Grenada rescue mission.

Only eight days later the INDEPENDENCE battle group and MARG were off again, headed for the eastern Mediterranean. Upon arrival, the force took up the support mission to Lebanon, a mission complicated by the tragic loss of 241 brave Marines and sailors a few weeks earlier. In Lebanon, though odds were clearly against us, the United States was trying to give peace and stability a chance.

INDEPENDENCE's reconnaissance flights, flights requested by the legitimate government of Lebanon, were fired on by Syrian-backed forces. The situation was untenable and action was required to silence those hostile forces. Again, the INDEPENDENCE battle group's performance was superb when put to the test.

Also off the coast of Lebanon, the wisdom of past Congressional decisions to recommission IOWA class battleships and to build TICONDEROGA class cruisers became manifest. After the tragedy of the suicide bombing of the Marine Barracks in Beirut, you will recall that the Secretary of Defense dispatched the battleship NEW JERSEY to waters off Lebanon. In the weeks preceding NEW JERSEY's arrival, cruisers, destroyers, and frigates provided naval gunfire support to silence hostile fire aimed against our Marines. Their accurate, effective gunfire demonstrated our resolve not to let direct acts of aggression go unanswered. The battleship's presence, however, greatly increased the firepower and underscored the fullness of our commitment. When that magnificent "Battle Wagon" arrived, after having been recommissioned at less than the cost of a new frigate, she carried a powerful message both to those who would fire on our Marines and to the Marines themselves. As one young Marine, who served in Beirut while NEW JERSEY was off the coast, put it --"To Marines who need gunfire support, a battleship is like one of those famous credit cards -- don't leave home without one." NEW JERSEY proved the quality of her original construction and modernization -- during her first deployment, which lasted nearly a year, she steamed without a single debilitating casualty.

TICONDEROGA first deployed last year, just nine months after commissioning, to the eastern Mediterranean where she operated in the task force with NEW JERSEY. TICO's performance was outstanding in all respects. Her AEGIS weapon system, the most sophisticated Anti-Aircraft Warfare (AAW) system in the world, provided a complete and comprehensive air picture of such unprecedented quality that Commander Task Force Sixty reported a substantial drop in Combat Air Patrol requirements. This meant a significant aviation fuel savings for the carrier's air wing.

Concern over suicide aircraft attacks was alleviated by the complete air picture TICONDEROGA provided. We had our guard up and were prepared to react to any attempted attack.

Not far from Lebanon, those bent on fomenting more unrest in the mid-east mined the Red Sea. Again, naval forces deployed to help locate and eliminate the mines which were hazarding international shipping approaching the Suez Canal. The dock landing ship SHREVEPORT and her mine clearing RH-53 helicopters responded on short notice and in cooperation with other Navies successfully cleared the sea lanes. The operation also included a second contingent of RH-53s specifically requested by Saudi Arabia to clear sea areas of special interest to the Saudis. As yet another indication of the flexibility of naval forces, USS LA SALLE, flagship of Commander Middle East Force, was directed to the Red Sea to support the RH-53s.

While the Iran-Iraq war continued, a Navy battle group remained on station in the northern Arabian Sea and naval forces, including modern destroyers and frigates, continued to operate in the Persian Gulf. These forces provided constant reminder to belligerents and neighboring states of U.S. resolve to prevent the conflict from spreading and to affirm U.S. commitment to maintain vital Sea Lines of Communication (SLOCs) in the region.

Our attack submarine force continued its high tempo operations demonstrating an ability to deploy on extremely short notice in both Fleets.

These selected examples highlight the Navy's continuing support of our country's national security objectives. Your Navy is at sea, forward deployed every day of the year doing many of the same things we would do in war. Indeed, by maintaining our forward deployed status, we help keep the peace we so cherish.

On any given day this past year nearly one-third of the Navy was underway. We conducted presence operations off the coast of Central America, monitoring possible arms shipments to that troubled part of the world. Exercises in the Caribbean demonstrated our resolve to support neighbors and allies in this hemisphere. We helped stem the flow of illegal drugs into the U.S. by Drug Interdiction Operations. Navy support of a major U.S. Coast Guard drug interdiction operation in the Caribbean last November and December, Operation Wagon Wheel, resulted in the seizure of 23 vessels. The Navy deployed to the Mediterranean fulfilling NATO obligations and reaffirming our commitment to key allies. Deployments to the Indian Ocean and Arabian Sea reminded the world that we will maintain key Sea Lines of Communication leading from the Persian Gulf. A task force circumnavigated South American and visited west African nations demonstrating our ties to the South Atlantic region. The Seventh Fleet operated in the western Pacific, demonstrating recognition of the strategic importance of economic and political ties in the burgeoning Pacific Basin. Of course, the submarine ballistic missile force maintained continuous and invulnerable vigil maintaining strategic deterrence.

More than half of our sailors are assigned to sea duty and accept long periods of separation from their families and loved ones. Indeed, sailors assigned to aircraft carriers are away from their families over 70 percent of the time. Yet, despite these arduous conditions, nearly 60 percent of first-term enlistees decided to re-enlist last year. Many of these young sailors are highly trained technicians with good civilian job opportunities. Why do they re-enlist? No doubt there are many reasons. But without professional and competent leadership, they would not have opted to continue their service. The superb leaders in today's Navy are an indispensable factor in our performance.

We are not resting on past laurels. We continually develop and test new tactics and refine strategies. Ships at sea conduct training to polish their tactical proficiency. For example, three aircraft carriers operated as a single battle force in the Pacific last fall to train in employment of multiple carriers. After completing such training exercises, we carefully analyze data collected in an effort to find improved procedures or tactics. We are not a static force. Even in-port, crews conduct exercises through very realistic, high-technology simulation techniques. And at the Naval War College we carefully refine strategy and tactics to enhance operational effectiveness.

I am quite proud of the initiatives we have taken at the Naval War College. Naval officers now recognize it as the crucible for strategic and tactical thought -- just as it was under Admiral Alfred Thayer Mahan. Almost all of our Commanding Officers now attend the War College upon completion of their command tours. This allows us to provide benefits of the very latest strategic and tactical experience to more junior students at the War College. We also have invigorated the Wargaming Center collocated at Newport. The Center is the most advanced such facility in the world, allowing us to test alternative strategies and tactics. We conducted 43 war games at the Naval War College during 1984. There was not a single day last year when the Center was not conducting or planning a war game.

Let me make one more important point about the Naval War College. Each year we select six Navy Captains and two Marine Corps Colonels who have distinguished themselves as outstanding strategists and tacticians. These officers form the Strategic Studies Group and spend a year dealing with some of the toughest tactical and strategic issues. They report directly to me.

We place great emphasis on joint operations with our sister Services. In addition to our historic and unique partnership with the Marine Corps, we have over the past several years strengthened our partnership with the Air Force, Army, and Coast Guard in planning, exercising, and executing joint operations. An important part of our cooperative effort has been the Memorandum of Agreement (MOA) which I signed with the Chief of Staff of the Air Force in September 1982. This MOA accelerated such on-going efforts as routinely including Air Force units in fleet exercises, developing doctrine and procedures for employment of AWACS and B-52's in maritime missions, and identifying aerial refueling requirements. The MOA also led to several new initiatives such as data link and communications interoperability, and joint air combat training ranges. Another example of our cooperative efforts with sister Services to correct warfighting deficiencies is the Memorandum of Agreement which I signed with the Commandant of the Coast Guard establishing Maritime Defense Zones (MDZs). Under this MOA, Coast Guard units combined with Naval forces, both Active and Reserve, will defend harbors and shipping lanes along our coasts in time of war. Navy-Coast Guard planning continues for the most efficient and effective use of MDZ forces to ensure adequate coastal defense. The Navy is also supporting the MOA signed last year between the U.S. Army and U.S. Air Force. We have identified eleven areas in that MOA in which we can contribute to enhanced joint operational effectiveness, and we are pressing ahead to do so. Efforts like this complement vigorous JCS efforts, including JCS-directed joint exercises and pilot projects on tactical and strategic air support to maritime operations.

In summary, because of their daily involvement in actual operations, at-sea exercises, and wargames, the men and women who lead the Navy today are creative tacticians and thoughtful strategists. They have indeed been honed in real world experiences of maintaining our freedom in a violent world. These leaders not only ensure our ability to deter conflict and protect U.S. interests today, they also develop the capabilities which will assure a similar posture in the future.

THE NAVY TODAY

Last year and the year before, I reported to you on my positive views regarding "...the current state of the Navy because of the favorable trends..." made possible by your support. I am pleased to report that those trends have continued. I am particularly pleased with steady, dramatic improvements in readiness and sustainability. This improvement reflects in large measure careful husbanding of resources and improved management techniques.

Management: The Good News

For the past two years I reported to Congress on our efforts to improve management policies and practices. We again made substantial improvement in 1984, but our very real progress is too often lost in the glare of publicity accorded instances of mismanagement, practices normally discovered and remedied by the Navy. One reads about $426 claw hammers and $100 diodes, but you do not hear the rest of the story. Yes, we paid $426 for a claw hammer. But we bought only one at that price, and then demanded and received reimbursement. Yes, we did purchase two diodes for $104 apiece. However, we received a full refund for both and purchased 122,000 of the same diodes at four cents apiece.

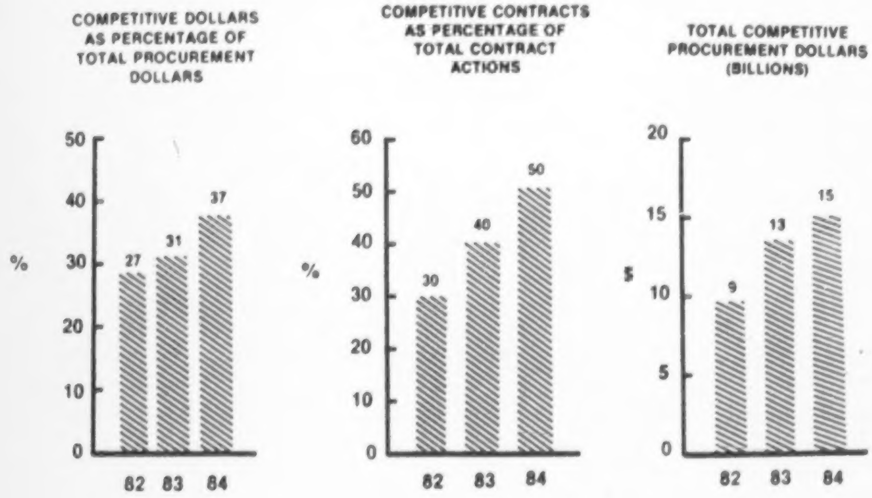
We are not perfect managers, nor have we made such a claim. Like most, we have chinks in our management armor. This was true particularly during the 1970s when double-digit inflation hid too many management weaknesses and budget austerity led us to believe we could scrimp on people and rely solely on computers. Attempted cures sometimes caused greater ills, such as lapses in quality control, hidden practices of gross overcharges, and abandonment of hands-on control techniques. Obviously, our management problems did not derive from criminal intent. They came from the unwitting waste of business-as-before management when economic convulsions were rampant.

The Navy has responded to the management challenges posed to correct earlier problems. Our own price fighters have exposed the vast majority of these problems. Investigative reporters are not the first to lift the rug and find excesses -- it is our own hardworking and concerned people. We recognize our responsibility to correct our own problems and use wisely the defense dollars entrusted to our care.

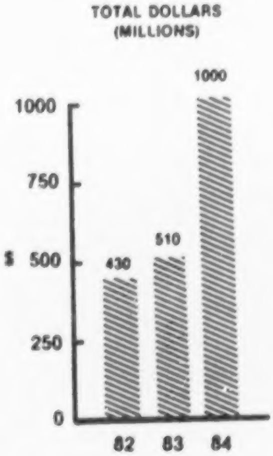
We can look with pride at a growing list of success stories. The results of our efforts to increase the use of competition have been impressive as shown in Figure One. In FY 84 we awarded 14.5 billion dollars competitively. That figure represents 37

FIGURE ONE

NAVY COMPETITION PERFORMANCE



COMPETITIVE SPARE PARTS PROCUREMENT



percent of total Navy procurement dollars and is a 54 percent increase over the total dollars awarded competitively in FY 82.

Equally significant is the fact that over 50 percent of all individual contract actions processed by the Navy last fiscal year were competitive. That contrasts with just 30 percent in FY 82. Competition in spare parts procurement totalled more than a billion dollars awarded competitively in FY 84, a 133% increase over the FY 82 amount. Representative of our increasing emphasis on competition, we have set a challenging goal for FY 85 of 45 percent of direct purchase dollars to be awarded competitively.

Paralleling these initiatives, the Navy has moved to allow more contractor participation in weapon systems design, and we have benefited through our expanded use of fixed price incentive contracts. Nearly all FY 84 shipbuilding contract awards were either Firm Fixed Price or Fixed Price Incentive with equal sharing of cost savings or cost growth up to the ceiling. Under these 50-50 share line arrangements, contractors are rewarded for under-budget performance and penalized by sharing cost growth up to the contract ceiling and bearing all cost growth over ceiling. This business strategy is being continued.

Multi-Year Procurement and leasing programs also have contributed significantly to the procurement economies and efficiencies achieved over the past several years. However, Congressional restrictions on these programs have limited attainment of full potential benefits. I strongly recommend that the restrictions on these programs be reassessed and eliminated.

Let me also mention our Central Navy Integrity and Efficiency Hotline. Its first year of operation led to savings of more than a million dollars. The Hotline, which celebrated its first anniversary on 3 October 1984, received more than 1,000 reports with 400 cases tasked for investigation to either the on-scene chain-of-command or the Naval Investigative Service. The $1 million savings resulted from such actions as identifying defective supply parts, erroneous shelf lives, excessive pricing and the waste of government resources. The Hotline is but one element of our on-going Navy drive to eliminate fraud, waste, and abuse within the Department.

We also have taken steps to correct deficiencies in the management and reporting of consulting services, generally known as Contractor Support Services (CSS). A Navy working group was established in the spring of 1983 to identify problem areas and recommend corrective measures. OSD created a similar group in

June 1984, and the Navy has actively contributed to the group's work. As a result of our efforts, we are developing clearer and more precise definitions of CSS and its components. Also, we are taking action to improve control, accounting, and management reporting procedures for CSS. A new omnibus directive soon will be promulgated to provide comprehensive and consistent CSS policy guidance.

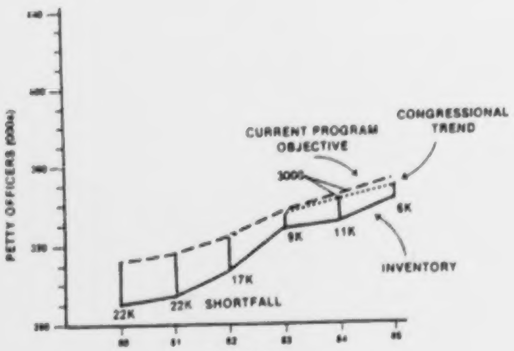
I want to emphasize again we recognize our obligation, and we will continue to make every effort to improve stewardship of the nation's defense dollars.

Personnel

A large national corporation used to have as its slogan, "Progress is our most important product." Progress is important in the Navy too, and the key ingredient in our progress is people. I do not have to remind you of the situation which existed just five years ago when some of our ships were unable to get underway. The problem was not lack of fuel, lack of ammunition, or lack of equipment. The problem was a lack of people. We simply did not have enough of the right kind of people to man our ships and aircraft squadrons properly. Five years ago, we had a shortfall of some 22,000 petty officers in the Navy. Congressional action to increase pay and benefits for the military enabled us to make tremendous progress in reducing the petty officer shortfall as you can see in Figure Two. Before pay and benefits increases, we were unable to meet recruiting or retention goals. At the end of FY 84, we recorded the fifty-eighth consecutive month of satisfying our recruiting goals, and were able to reenlist 58 percent of the young petty officers completing their first enlistment. As shown in Table One, second and third term enlisted personnel reenlisted in equally impressive numbers.

FIGURE TWO

PETTY OFFICERS FOR 600-SHIP NAVY
(E-4 THRU E-9)



REFLECTS NEW SHORE STAFFING STANDARDS

TABLE ONE

ENLISTED RETENTION

	ELIG TO REENLIST	RETENTION GOAL	ACTUAL REENLIST
FY 82			
First Term	43,659	47%	21,949 (50.3%)
Second Term	19,867	67%	12,517 (63.0%)
Third Term	18,666	98%	17,788 (95.3%)
FY 83			
First Term	39,185	49%	21,824 (55.7%)
Second Term	17,287	63%	11,312 (65.4%)
Third Term	18,701	96%	18,065 (96.6%)
FY 84			
First Term	45,924	50%	26,631 (58.0%)
Second Term	19,852	65%	12,784 (64.4%)
Third Term	21,052	95%	19,979 (94.9%)
FY 85 (GOAL)			
			(projected retention)
First Term	48,288	58%	28,007 (58%)
Second Term	22,026	66%	14,537 (66%)
Third Term	20,405	95%	19,385 (95%)

Our Family Support Program has contributed substantially to improved retention and is designed to assist our people and their families with problems inherent in military service. Family Service Centers assisted over 600,000 active duty members and their dependents with help in relocation, deployment assistance, financial education, job referral and counseling. A Family Advocacy Program targets the prevention of and intervention in family violence. This effective, well rounded Quality of Life program lets our people know that we care about their well being; as a result, more decide to remain in the Navy.

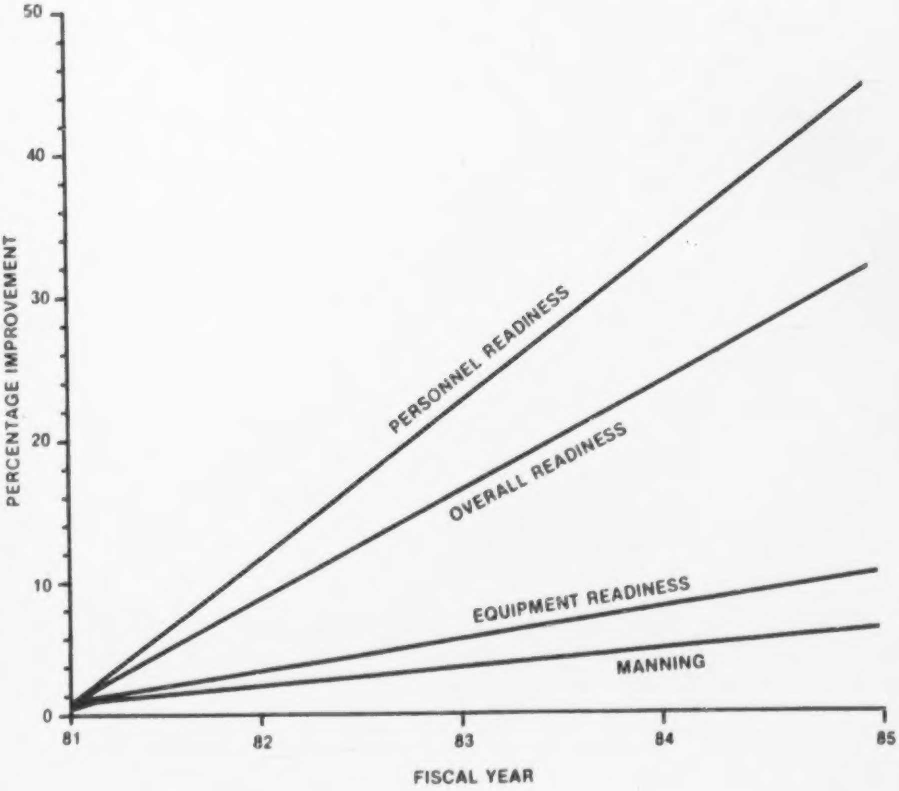
However, mere numbers of recruits and reenlistments are not the only objective; quality is of equal importance. Last year 93 percent of non-prior service enlistees were high school graduates and 65 percent were classified in the upper mental group profile on the Armed Services Vocational Aptitude Battery. Moreover, the retention picture has improved to the point that we can be more selective in deciding to allow sailors to re-enlist. I cannot over-emphasize importance of the quality dimension. Those of you who have visited our ships and aircraft squadrons recognize their technological complexity. We need highly capable technicians to maintain and operate state-of-the-art platforms and systems. To match the Soviet Navy's sizeable numerical advantage, we must have a qualitative edge. Such qualitative superiority demands highly capable personnel.

We cannot operate such sophisticated equipment with personnel debilitated by the use of illegal drugs. Yet, in 1980 tests showed that nearly one out of every two sailors used marijuana or hashish. Experts told us we could not make improvements because the Navy has a microcosm of a society which accepted drug abuse. After careful research, we established a scientifically reliable program and enforced it rigorously. Today, tests show that less than ten percent of our sailors use marijuana or hashish and the trend continues to improve. Indeed, our efforts have been so successful that we are consolidating Alcohol/Drug Rehabilitation Centers, and placing greater emphasis on substance abuse prevention.

Yes, our progress over the past several years is largely due to improved manning. The relationship is clear and has been demonstrated by many analyses including one recently completed by the Naval Postgraduate School. Modest increases in manning have permitted us to put the right people in the right places to enhance personnel and fleet readiness. As shown in Figure Three, our ability to recruit and retain personnel in critical skills have resulted in a 32 percent increase in overall readiness since

FIGURE THREE

FLEET MANNING AND READINESS



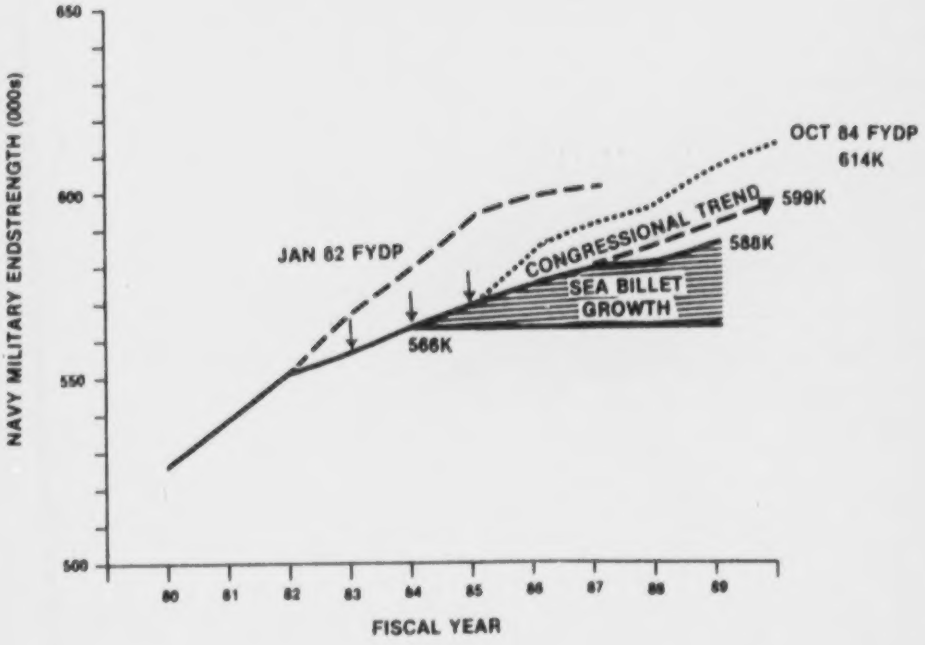
1981. The SPS-48 radar provides an excellent example. The missile systems on our cruisers and destroyers are dependent on the powerful SPS-48 3D radar to detect threat aircraft and missiles at long ranges. In 1981, we had only about half the required SPS-48 radar petty officer technicians and this key radar had an unacceptable level of down-time throughout the fleet. Today the SPS-48 technician rating is manned at the 100 percent level and down-time per quarter has been reduced by 67 percent. Moreover, the shortage in SPS-48 petty officer technicians forced us to hire civilian contractors to help maintain the radars at a cost of nearly a million dollars per year. Today the requirement for civilian contract support has been cut nearly in half.

Adequate numbers of properly trained, disciplined, and motivated people go far to explain why you no longer hear about ships unable to get underway. We have made other improvements as well, reducing the manpower requirements or manpower-intensity of our ships and systems. The ARLEIGH BURKE class destroyer (DDG-51) which Congress funded last year is equivalent in size and far exceeds the firepower of a World War II cruiser. Yet the DDG-51 manning requirement is less than one-third of a comparably sized World War II cruiser. These manpower savings are evident in Spruance class destroyers (DD-963) and Oliver Hazard Perry class frigates (FFG-7) as well as other surface ships. In the submarine area, we continue to make major improvements in capability without increases in crew size. Such initiatives have permitted substantial reductions in manpower costs as a portion of the Navy budget. Manpower costs represent 30 percent of the Navy budget today as opposed to 41.6 percent in 1974.

Despite these successes, it is impossible to increase the size of the Navy from 479 ships to 600 ships without an increase in manpower. As we began building toward the 600-ship Navy, we projected a requirement for an additional 102,000 personnel. A 600-ship Navy represents a 25 percent increase in the size of the fleet from its low point in 1980. Yet, improvements in manpower intensity will enable us to man the fleet with less than a twenty percent increase in manpower. Accordingly, Navy end-strength needs to grow at a modest annual rate of less than two percent. However, previous Congresses have capped end-strength growth at about half of this requirement as you can see in Figure Four. This is producing a negative impact on readiness. For the first time in recent history, CINCPACFLT has included end-strength as one of his top five concerns, indicating that any further degradation of his shore establishment cannot be accepted without a reduction in functions. This level of fleet concern indicates we have reached the limit of shore billet degradation. Also, *FIGURE FOUR*

NAVY ENDSTRENGTH

TREND IN CONGRESSIONAL SUPPORT



end-strength constraints limit timely relief of ship based personnel eligible for shore duty and cause longer sea duty tours for sea intensive ratings, which inevitably results in lower retention. If we cannot retain adequate numbers of petty officers, recent achievements in improved readiness and maintenance will quickly erode. Moreover, constraining overall end-strength below programmed levels will require the Navy to reduce accessions. This causes a long-term degradation of petty officer inventories, eventually creating an insufficient base from which to promote the required number of petty officers. The petty officer shortfall projected to be overcome by FY 88 will increase instead, with detrimental effects on fleet readiness. I am not speculating, for we endured a situation much like it in the 1970s. Inadequate numbers of skilled petty officers caused longer sea tours, compounding retention shortfalls, and readiness plummetted. I cannot over emphasize the importance of your approval of our FY 86 manpower request, which I will address in more detail in discussing the budget submission.

600-Ship Navy

With the bipartisan support of the past two Congresses, we are well on our way toward attainment of a balanced 600-ship Navy by 1989 including 15 carriers, increased amphibious lift, recommissioned and modernized IOWA class battleships, TICONDEROGA-AEGIS class cruisers, ARLEIGH BURKE class destroyers, 100 nuclear powered attack submarines, and a strengthened leg of the strategic triad in the OHIO class submarine, and TRIDENT II missiles. This past year witnessed the addition of nineteen ships to the fleet. The battleship IOWA was recommissioned, the second of TICONDEROGA class cruisers, YORKTOWN, was commissioned as were one TRIDENT submarine, five attack submarines, eight Oliver Hazard Perry class frigates, and two TAGOS surveillance towed-array ships. Since 1980, the fleet has grown from the 479 ship level to the present level of 523.

Qualitative as well as the quantitative aspects of this growth are very important. We are building the right ships to counter the Soviet Navy's numerical advantage. Such qualitative superiority is obvious in our nuclear powered aircraft carriers and embarked air wings. The improved 688 class submarines being authorized and built today are twice as effective as the original 688 class submarine. We have revolutionized surface combatant Anti-Air Warfare capabilities with the AEGIS system in TICONDEROGA class cruisers. This system's ability to engage large numbers of air threats simultaneously is a major step in countering cruise missile saturation raids. Many of our battleships, cruisers, destroyers and submarines are being armed with TOMAHAWK cruise missiles, capable of flying long distances and attacking targets at sea or on land. Its broad compatibility with our combatants distributes offensive power as never before, greatly compounding the enemy's targeting problem. TOMAHAWK complements the power of the carrier air wing and multiplies the effectiveness of the force at sea. Additionally, TOMAHAWK opens the way for deploying battle forces without carriers when carriers are not available or not appropriate to the threat.

OHIO class SSBNs represent a key element in our strategic Triad and substantially increase our deterrent posture. Any attempted Soviet first strike would leave the TRIDENT force on station, ready to respond and capable of inflicting unacceptable retaliatory damage. The continued invulnerability of our strategic submarines is crucial to our national security. To this end the Extremely Low Frequency (ELF) System adds a significant new dimension to SSBN communications, enabling commanders to communicate reliably with strategic submarines operating at deep depth and standard speeds. Further, our SSBN Security Program continually reviews technologies which conceivably could be relevant to future survivability of the SSBN force, including actual or potential breakthroughs. Although most scientific phenomena are well understood, healthy skepticism and vigilant search for new ideas must be maintained as technologies continue to improve. Because of this program, which stays on the leading edge of science and has the best technical support in the country, our best estimates indicate that there is no credible threat today, or in the foreseeable future, to our SSBN force. The situation is dynamic, and we must continue our vigorous efforts to ensure we remain ahead of the threat.

Recent fleet experiences, especially the Royal Navy's Falkland Islands combat experience, highlight the importance of ship survivability. We must build ships that can go in harm's way, take battle damage, survive, and remain operationally capable. We have made significant progress, and I am dedicated to continue improving our survivability posture. We intend to expedite survivability improvements into the fleet to ensure maximum readiness and warfighting sustainability during peacetime and combat operations.

Results of shock tests conducted this past summer on USS YORKTOWN, second of the TICONDEROGA class cruisers, point to the success of our passive survivability program. YORKTOWN experienced four significant percussion shocks from nearby explosions simulating the effect of battle conditions. Even during the most severe shock, the ship did not go dead in the water. Her main engines were not damaged. Her combat systems were partially impaired, but restored in short order.

Improving ship survivability is an important element in our program to build a 600-ship Navy. I am encouraged by our progress to date and, with your continued support, we will make further headway on this important problem.

Of course, 15 deployable aircraft carriers remain key to an effective, balanced 600-ship Navy. We will achieve that goal by building the three new carriers authorized and funded and by modernizing eight of our older carriers in the Service Life Extension Program (SLEP). SARATOGA, the first carrier to be SLEPed, just completed her first post-SLEP deployment in outstanding fashion. Prior to deploying, SARATOGA passed a comprehensive and rigorous engineering examination (OPPE) conducted by a special inspection team from the staff of the Commander in Chief, U.S. Atlantic Fleet and then achieved high grades on Operational Readiness (ORE) and Preventive Maintenance (PMS) inspections. After passing these important inspections, SARATOGA deployed to the Mediterranean for six months and performed brilliantly. After successful full power trials, SARATOGA had no boiler problems during 2400 steaming hours per boiler. Finally, the carrier's air wing averaged 78.3 percent Mission Capable during the last four months of deployment.

Lessons learned during SARATOGA's trailblazing SLEP are being applied to the FORRESTAL and INDEPENDENCE SLEP programs. SARATOGA's record this past year clearly reaffirms the wisdom of SLEP. The SLEP program extends the service life of our aircraft carriers from 30 to 45 years, provides a cost-effective alternative to new construction, and ensures that the National Command Authority will have the flexibility of a deployable 15 CVBG force.

Our program to maintain aircraft inventories with the proper mix and in the right numbers to support the growing Navy was sustained in 1984. A total of 281 new aircraft entered the fleet including the F-14A, F/A-18A, A-6E, EA-6B, E-2C, and P-3C. I am particularly pleased to report our experience with the F/A-18 Hornet now appearing in the fleet.

The F/A-18 is the first entirely new tactical aircraft to become operational with the U.S. Navy in the past twelve years. CONSTELLATION, the first carrier to receive F/A-18 aircraft, is operating today in the Pacific Ocean with twice the fleet air warfare capability she had before bringing aboard two Hornet

Strike Fighter squadrons. Recent reports from CONSTELLATION have been extremely positive, with the Hornet displaying launching and boarding rates far exceeding all expectations. The F/A-18 is proving to be three times as reliable as any aircraft in the fleet, requiring only half the maintenance man hours of other Navy aircraft. As it approaches 100,000 cumulative flight hours, the F/A-18's safety record exceeds those of comparable Navy aircraft by 50 to 80 percent. The carriers CORAL SEA and MIDWAY will deploy with the F/A-18 in 1985 and 1986, respectively, further expanding the capability and flexibility of the fleet.

While the F/A-18 safety record has been impressive, this past year was a remarkably good one in aviation safety across the board. Indeed, 1984 was the safest year in naval aviation history. The number of aircraft mishaps in 1984 was 21 percent lower than in 1983. Fatalities resulting from aircraft mishaps were 23 percent lower in 1984 than in 1983. And, the cost of aircraft mishaps in 1984 was 39.0 percent below the 1983 level. We saved 21 lives, 19 aircraft, and over two hundred million dollars ($200,000,000) compared with 1983.

I also am pleased with our progress in exploiting space to support the operations of the 600-ship Navy. Space assets, for example those providing reliable and clear real time communications among naval forces, are vitally important for everyday fleet operations. The first space shuttle deployment of communication satellites for the Navy -- LEASAT I and II -- occurred last year. Two Navy satellite development programs, Navy Remote Ocean Sensing System (N-ROSS) and Geodesy Satellite (GEOSAT), will provide highly accurate oceanographic and meteorological data for naval forces. Global Positioning System (GPS) terminals in ships, submarines, and aircraft, will provide significantly improved navigational data. The Naval Space Command has helped focus our space exploitation efforts and will support the Unified Space Command when established.

In October 1984, the Navy placed the first civilian oceanographer aboard the Space Shuttle. This flight demonstrated the role of manned space flight in advancing knowledge of the ocean and emphasized the need for an ocean satellite system. Manned space activity in oceanography and existing environmental satellites complement each other in important ways. Space oceanography efforts continually reveal new insights into the complexity of the ocean and phenomena we do not fully understand. In this sense, the ocean is becoming more opaque rather than more transparent. As we improve our understanding of the ocean, we enhance our ASW posture and reduce our own vulnerability. Space-based oceanography is revolutionizing ocean science research, providing unique insights into strategic and tactical exploitation of the complex ocean environment, and affirming the importance of the Navy's role in space.

Naval Reserve

I am pleased with the progress we have made in integrating the Naval Reserve into our total force. We have made significant headway on implementing the Total Force initiatives reported to Congress last year, and this year's report builds upon that solid base. Today, the Naval Reserve is an indispensable component of the Navy, and without its important contributions, we would not be able to fulfill our forward deployed, high OPTEMPO commitments.

Fully one-third of our ASW Patrol Aircraft (VP) squadrons are in the Reserve Force. Almost half of our reserve VP squadrons fly highly capable P-3 TACNAVMOD aircraft which allows Reserve flight crews to operate side by side with active squadrons. Similarly, our surface ASW efforts increasingly rely on contributions of Reserve Force ships. Today with KNOX (FF 1052) and OLIVER HAZARD PERRY (FFG 7) class frigates, Surface Reserve Force capability steadily grows. Both classes of ships, equipped with the latest in ASW equipment, prove their worth in both the Atlantic and Pacific theaters on a regular basis. In a like manner, our submarine forces also benefit from the contributions of Reserves in Intermediate Maintenance Activities, operational staffs, and command centers.

Because of the integral role of the Reserve in today's Navy, I want to highlight some initiatives, mention our progress, and point out plans for the future.

This past year witnessed a remarkable expansion in the size and capability of the Naval Reserve. Drilling Selected Reservists increased to more than 102,400 by the end of FY 84, with the number of Reservists on full time active duty for Training and Administration of the Reserve (TAR) at more than 13,300.

Reserve personnel goals are indeed challenging and we have responded with programs designed to offer new and enhanced incentives and improve retention. The new Sea and Air Mariner, or SAM, program has been remarkably successful in providing junior enlisted personnel for the Selected Reserve. We recruited the full quota of 10,000 non-prior service personnel last fiscal year, and are well on our way to accessing the same number this year.

In the Naval Surface Reserve Force, two more FFG-7 class frigates will join the Naval Reserve in FY 85. When added to three FFG-7's and the six FF-1052's now in place, the Naval Reserve Frigate Force will increase to eleven. Six Craft of Opportunity (COOP) units also will join the Naval Reserve Force in FY 85. In FY 86 we will add four more FFG-7's, thereby passing the half-way mark in this ambitious program of transitioning 26 ASW ships to the Naval Reserve Force, 18 FFG-7s and eight 1052s. Six craft of opportunity (COOP) units and three ARS class ships will join the Naval Reserve Force in FY 86. Moreover, two new Seabee battalions as well as a Mobile Inshore Undersea Warfare (MIUW) unit will stand up in FY 86. This trend of NRF growth will continue beyond FY 89 as AO-177 class oilers, eight Mine Countermeasures Ships (MCM-1) and 17 Minesweeper Hunter (MSH-1) class ships transition to the Naval Reserve Force.

The Naval Air Reserve Force has embarked on an ambitious modernization program with both carrier airwings slated for transition to state-of-the-art aircraft: F-14, F/A-18, A-7E, and E-2C. The first Reserve E-2C squadron is now in place. VF-301 accepted its first F-14 aircraft in October 1984, and F/A-18 transition training for VFA-303 aircrew and maintenance personnel has been underway for over a year. In FY 86, VFA-303 will receive its own aircraft and be ready to mobilize. A-7E transition for one squadron in FY 85 and two squadrons in FY 86 will complete the programmed upgrade from the A-7B. Helicopter ASW support for Naval Reserve Force frigates will be provided by three HSL squadrons, one in San Diego, one standing up in FY 85 on the East Coast, and a third to be commissioned in FY 86. The Navy's only combat search and rescue squadron, Reserve Helicopter Composite Squadron NINE, based in San Diego, will evaluate the two UH-60 aircraft authorized by Congress last year. Seven more Reserve P-3 squadrons will receive TACNAVMOD upgrades, three in FY 85 and four in FY 86, to complete the program for all Reserve maritime patrol aircraft. Additionally, this year we retire our remaining C-118 aircraft and complete our airlift modernization by purchasing the final increment of used DC-9's for our Reserve Air Transport Squadron. I want to point out that in 1984 we initiated a new Reserve Squadrons Augment Unit (SAU) training program in which SAU aircrews fly the same A-6, F-14, and E-2C aircraft as their gaining squadrons. We plan to expand the SAU program to increase our total force readiness.

We intend to build the Naval Reserve Force into an even more capable part of the Navy team. We have taken measured steps to ensure that the Naval Reserve Force will have the trained people, modern ships and aircraft, and integrated logistics support to do the job upon mobilization. We are working toward optimum utilization of all our assets.

We have made important headway on Congressional directives to increase our reliance on Selected Reserve units to assume responsibilities traditionally assigned to active duty units. I am, however, concerned that we may not be able to gain maximum potential from the Reserve in the period prior to full scale hostilities. For example, development of the concept of Maritime Prepositioned Ships has generated a potential need for early availability of cargo handling forces. These forces will support the U.S. Marine Corps in establishing Marine Amphibious Brigades ashore in overseas locations within ten days of an alert. This scenario could unfold in a pre-hostilities environment prior to the execution of any form of mobilization or call-up. Since active duty cargo handling forces are not sufficient to carry out this mission, early recall of Reserve cargo handlers may be necessary. Similar conditions exist in other military support functions which we have transferred from active to our Selected Reserve forces. Ways to overcome this impediment to our ability to respond must be assessed, and I solicit your help in shoring up this important area.

Strategic Sealift

The successful deployment and support of forces in executing military strategy in both war and peace depends heavily on Strategic Sealift. Increasing emphasis on mobility force readiness coupled with a precipitous decline in the U.S. Merchant Marine has brought the Strategic Sealift role into sharp focus. Recognizing the criticality of this role, in March 1984 the Navy formalized Strategic Sealift as a distinct Navy function. Congressional support of related programs has enabled us to move rapidly towards our sealift and cargo movement objectives. The Ready Reserve Force (RRF), which would be activated in time of crisis, is expanding toward the current goal of 61 dry cargo ships and 16 tankers. Next year, we will commence our Sealift Enhancement Features (SEF) program to increase the military utility of commercial merchant ships.

The completion of several ship conversion programs in FY 86 will dramatically increase our mobility capability. The last of eight Fast Sealift Ships (SL-7) will deliver, providing a sealift capability able to deliver combat equipment at speeds in excess of 30 knots. They will be strategically berthed near designated Army embarkation ports, ready for full operational service within four days of notification.

The last of thirteen Maritime Prepositioning Ships (MPS) will deliver and form the third MPS squadron. This squadron will provide forward deployment of equipment for three Marine Amphibious Brigades and combat support for 30 days, thereby expanding the rapid global response capability of the Marine Corps. These MPS squadrons will be prepositioned in the Eastern Atlantic, Western Pacific, and Indian Ocean. This concept combines the responsiveness of airlifted troops with an equally responsive sealift delivery of prepositioned combat equipment as a major improvement in our ability to form a rapid credible forward defense. Funding of the second aviation maintenance support ship (TAVB) this year will augment the MPS squadron deployments. We also will see the delivery of the first hospital ship (TAH) in 1986, providing much needed medical care.

As demonstrated in Exercise JLOTS II during the fall of 1984, the auxiliary crane ship has proven to be an indispensable asset to meet cargo offload and discharge requirements, either through damaged port facilites or directly over the shore. This fiscal year we continue our efforts to complete an eleven ship program by the end of FY 88.

We will continue the Depot Ship Prepositioning Program (formerly NTPF) which provides a credible deployment potential for Southwest Asia through afloat prepositioning of Army and Air Force equipment and ammunition along with common user POL stocks.

Delivery capability alone will not do the job. Amphibious offload systems and equipment remain essential to discharge ships and transport combat equipment and sustaining support ashore. The sealift program is structured to provide that requisite balance. In the summer of 1984, the Navy signed an agreement with the Army to enhance joint inter-service responsibility in the development, acquisition, and use of Army/Navy cargo offload and discharge systems. The Army Chief of Staff and I endorse this cooperative logistic effort and are enthusiastic about the benefits to be gained. Our objective is to achieve a balanced program and ensure that strategic sealift ships, their cargo offload systems and supporting logistic systems provide a smooth flow of materials to support combat forces worldwide.

Research, Development, Test and Evaluation (RDT&E)

Challenges of the current and future world environment confirm that we will need highly capable ships, aircraft, and systems to deal with the highly capable threats we face. It has long been basic U.S. policy that we cannot and will not match the Soviet numerical advantage, but will instead offset any numerical disadvantage with superior qualitative performance and a technological edge. Our research and development programs are the foundation of our ability to maintain this qualitative edge.

Last year, I raised with you several concerns about our research and development posture, particularly the adverse effects of decreased funding coupled with the redirection of a large number of line items. Better dialogue which ensued has helped to improve this situation. I look forward to your continued support for a vigorous research and development program with modest but essential growth.

Research and development in the Navy is not isolated from warfighting needs; either today's or tomorrow's. Navy research and development is tightly coupled with today's maritime strategy and guided by our on-going long range planning efforts.

In evaluating the relevancy and effectiveness of our research and development program, we utilize not only in-house expertise but also solicit ideas from knowledgeable people outside the Navy. My CNO Executive Panel Advisory Committee (CEP) reviews key strategy and development programs. We also work with the Naval Research Advisory Committee (NRAC) and the Naval Studies Board (NSB) of the National Academy of Sciences, both consisting of highly qualified and respected members from the science and technology communities. Their recommendations provide unique insights into naval problems and lead to changes in our development plans. We also rely on the advice of the Navy laboratories and U.S. industry for development of systems which will provide the future fleet with the means to execute its mission. Only proposed systems that offer the greatest effectiveness while remaining affordable are accepted and incorporated.

I am particularly pleased with the Test and Evaluation part of our RDT&E efforts, and I want to highlight the achievements of the Navy's Operational, Test and Evaluation Force (OPTEVFOR).

During the past two years, OPTEVFOR has published 142 Operational, Test, and Evaluation (OT&E) format project reports, 45 OT&E quick look reports, and 28 operational tactics guides. Over this period, OPTEVFOR recommended fleet introduction of 67 percent of the systems completing OT&E. OPTEVFOR recommended against 19 percent of the systems and was unable to make any recommendations without additional OT&E in fourteen percent of the cases. A testing organization that refuses to approve a full third of the systems it reviews builds a reputation. The Navy's OPTEVFOR is known for its objectivity, independence, and rigor. I assure OPTEVFOR's independence, as it operates under my direct command with no intervening layers, reporting all operational test and evaluation results directly to me and the Secretary of the Navy. OPTEVFOR tries to defeat each new system on its own terms and our program managers view OPTEVFOR as an adversary. Just as in other areas in our society, this adversarial relationship is healthy and constructive. It ensures that systems operate properly before they enter the fleet.

I do not want to imply that we have solved all the problems in the OT&E process. Clearly, we have not. For example, we must improve the development of operational requirements and performance thresholds. Too frequently these are poorly defined or written as technical vice operational measures. It is indeed difficult to develop substantive and defensible operational requirements and performance thesholds. Nevertheless, they are critical to the T&E process and we are making real progress in our efforts to rectify this problem.

Overall, I think the OT&E process is working well in the Navy. We work closely with the newly established Operational Test and Evaluation Office in OSD to provide appropriate operational test and evaluation data required by Congress. I look forward to further improvement with your continuing support.

THE FY 86 BUDGET

Budget preparation is far from an abstract accounting exercise. Indeed, the most telling policy statement of any organization may be its annual budget. A budget clearly highlights priorities and needs, and this year's Navy budget request is no exception.

The foundation of the Navy's budget is the maritime strategy; that is, the role of maritime forces in the national military strategy. The maritime strategy follows from and supports the goals and guidance set forth in SECDEF and JCS documents, and describes the employment of naval forces in a global war against the Soviet Union. While this global war case is not the most likely contingency we face, it is the most demanding, and forms the basis for our budget preparation. To these requirements, however, we must add the considerable resources needed for the operations of a forward-deployed Navy, maintaining deterrence in this era of violent peace. You will note that more than half of the FY 86 budget request is slated for readiness.

The Navy is requesting a Total Obligational Authority (TOA) of $97 billion for FY 86. This represents 4.96 percent real growth over our FY 85 funding and is, we think, the minimal level of growth adequate to ensure a sound balance among the four pillars of readiness, sustainability, modernization, and force structure.

The first and largest of the pillars is readiness, comprising over 50 percent of the budget request. It contains the funding required to operate and maintain the fleet on a day-to-day basis, e.g., money for ship and aircraft fuel, salaries for our people, maintenance and repair of ships and aircraft, training, and support. In short, the readiness pillar is the day-to-day cost of operating the Navy and keeping it ready to fight. The second pillar is sustainability, and it represents about ten percent of the requested funds. These funds cover the cost of the Naval Reserve, stocks of weapons, and war reserve material. The modernization pillar accounts for approximately 20 percent of the request and includes all Navy Research, Development, Test and Evaluation (RDT&E), fleet modernization or SHIPALTS, and aircraft and weapons modifications. The fourth pillar is force structure, and it also represents about 20 percent of the program. Included here are the costs of new ships and aircraft and the costs of bases and support facilities required to maintain and expand the size of the force. The growth in each of the four pillars represents a relatively uniform extension of the FY 85 budget and is consistent with our estimate of requirements based on our understanding of national security policy and objectives.

I now would like to review the four pillars in more detail, highlighting our progress over the past few years, and noting some present and future objectives.

Readiness

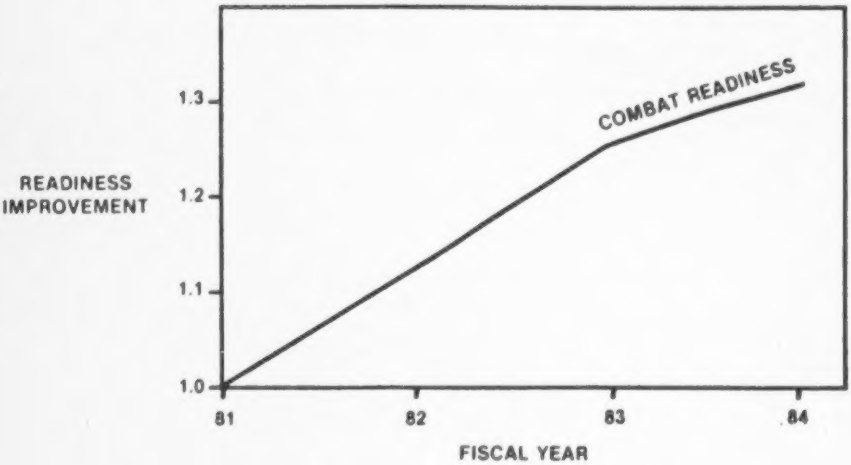
We have attained impressive improvements in warfighting readiness. This assessment is not based on a seat of the pants judgment; although were you to ask virtually any sailor or naval officer in the fleet, he or she would certainly affirm this judgement. Readiness of naval forces is demonstrable through objective measurements.

Every ship and aircraft squadron in the Navy is assigned mission areas which require specific capabilities. As an example, Navy destroyers must be prepared for Anti-Submarine Warfare (ASW), Anti-Aircraft Warfare (AAW), Anti-Surface Warfare (ASUW), etc. We assess each destroyer's readiness to perform these missions and its overall capability to perform all assigned mission areas. Readiness within each mission area is further divided by categories, including personnel, equipment, training, and supply support. For example, the ship's readiness to perform ASW will be affected by the number and proficiency of its people. Further, the ship's readiness to perform AAW will be affected by the material condition of its radars and communications equipment. Training is a key component of readiness with rigorous requirements for individual sailors as well as teams which operate together. We gauge training readiness based on amount of training accomplished and when completed. Lastly, without adequate supply of ammunition and spare parts to repair equipment, readiness would be degraded.

At least once per month, or as changes in status occur, each ship and aircraft squadron submits a report of its personnel, *FIGURE FIVE*

OVERALL READINESS TREND

IMPROVED READINESS
SHIPS & AIRCRAFT SQUADRONS



material, training, and supply support readiness in assigned mission areas. This reporting procedure has been in place and adhered to for more than a decade.

Accordingly, I report with full confidence, based on tried and tested empirical data, that we have witnessed an impressive improvement in Navy readiness since 1981, as shown in Figure Five. The data not only provide commanders in the field with tools to gauge the readiness of their forces, but also provide the OPNAV staff with information to plan and budget for the proper allocation of funds; it helps us establish priorities and match funding to priorities.

Personnel

As I have indicated, nothing is more central to readiness and overall Navy posture than our people. Well established measurements show that personnel readiness in the Navy increased substantially between 1981 and 1984, and is without question the foundation of our overall readiness improvement. To sustain this progress, the FY 86 personnel request supports a measured increase in manpower to allow us to man today's force, to support it adequately with shorebased maintenance and support facilities, and to build the skill and experience levels needed for the near future. We need balanced increases in the total force including an increase of 15,000 in the active force for a total of 586,300. Reserve force structure improvements necessitate increases for average strength of all Reserve personnel in a paid status of 10,500 to reach a total of 134,400. Civilian personnel spaces will total 318,700, an increase of 1,400.

These marginal increases are key elements in supporting future force levels. The active strength increase of 2.8 percent over FY 85 is small in relative manpower terms, and small in dollar costs when compared to initial force level investment costs. As I pointed out earlier, previous Congressionally imposed end-strength constraints, (Figure Four) have created significant difficulties in properly manning shore activities to support the operating force, and sea-intensive ratings are forced to stay at sea longer. We requested an end-strength growth of 28,000 regular and active duty reserve personnel in FY 83, Congress approved only 19,100 growth. For FY 84 we requested an end-strength growth of 11,900, Congress approved 4,500. And, for FY 85 we requested a growth of 10,700, Congress approved 6,500. The end-strength growth permitted by Congress over the past three years has been adequate to support only manpower required to provide initial crews for new ships as they joint the fleet and to correct manning deficiencies in existing ships and aircraft squadrons. If this trend continues in FY 86 and beyond, the Navy will be 34,000 people below total programmed objective in FY 89, creating a critical inventory shortfall and robbing us of the base from which to promote required numbers of petty officers. This inevitably will cause serious readiness degradations much as we faced in the 1970s. There is no alternative unless adequate end-strength growth is authorized.

As I noted earlier, 1984 was another good year in recruiting. We achieved recruiting goals and 93 percent of the non-prior service recruitees had high school diplomas. However, one must balance this success with awareness of the declining pool of males in the 17-1/2 - 21 age group, as you can see in Figure Six. Indeed, as in the other Services, the Navy began to see signs of a more difficult recruiting environment in 1984. Two early indicators of our recruiting program's capability to meet programmed accessions are the ability of our recruiting districts to obtain new contract objectives and the status of the Delayed Entry Program (DEP), our bank of prospective sailors. Figure Seven shows a serious depletion of this bank because of the increasing number of recruiting districts unable to meet new contract objectives. At the end of FY 84, the formerly healthy DEP declined to the 40 percent level, and the downward trend continues. Experience during the 1970s shows that when the DEP

FIGURE SIX

QUALIFIED NPS MALE POTENTIAL RECRUITS

Source: U.S. Census Bureau

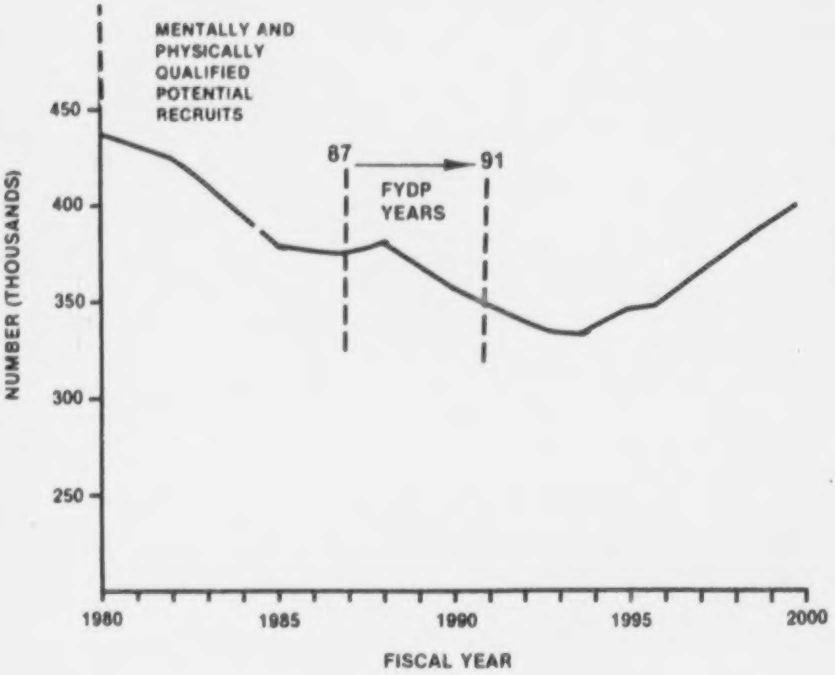
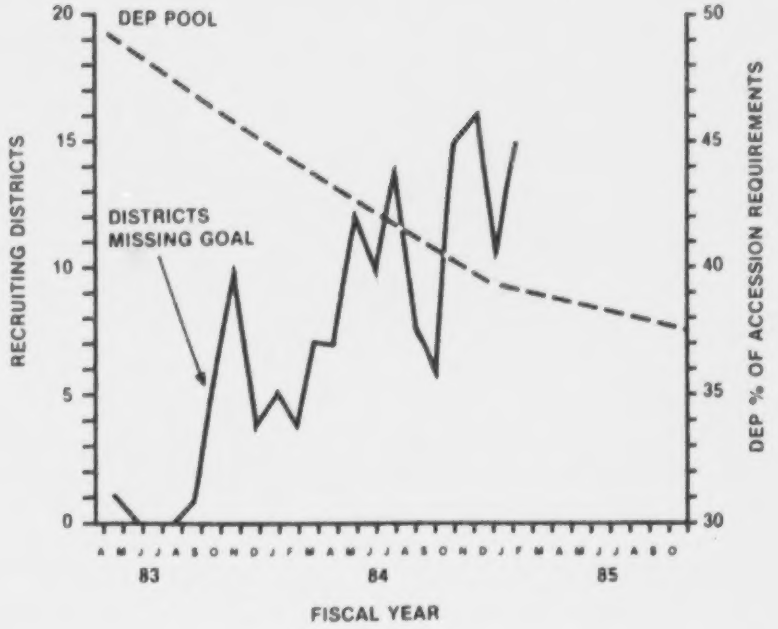


FIGURE SEVEN

RECRUITING DISTRICTS MISSING NEW CONTRACT GOALS AND DEP POOL REDUCTIONS

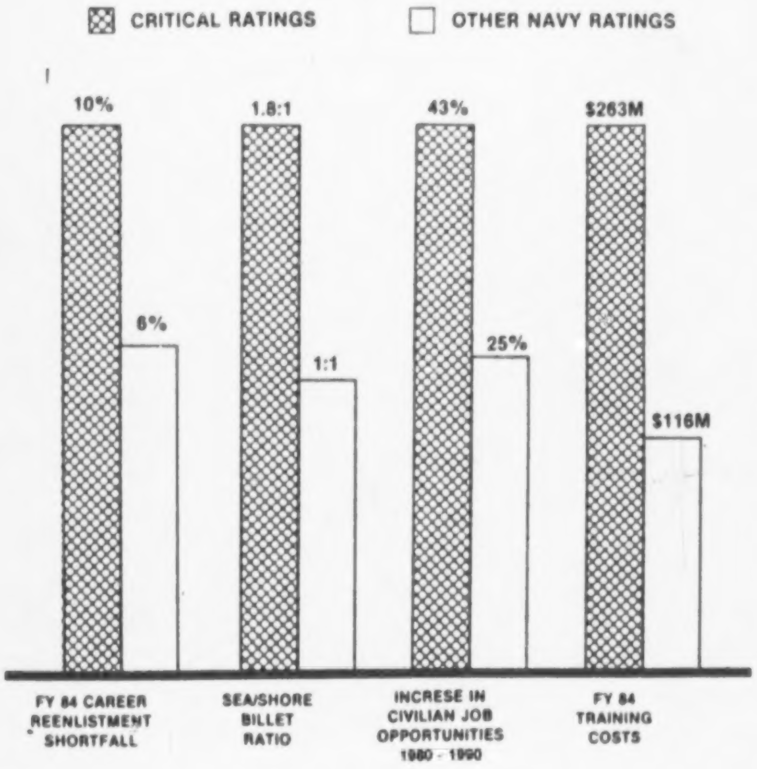


reaches the 33 percent point, recruiters are pressured to meet current accession demands and recruit quality plummets. While there are other signs pointing to recruiting difficulties, suffice to say that with the manpower pool declining and the economy growing, we face an increasing challenge to recruit sufficient numbers of needed quality personnel. These unmistakable signs make the requested recruiting and advertising budget especially critical if we are to keep pace with changing manpower market conditions.

Of course, retention is just as important as recruiting in ensuring a force of adequately trained personnel. It is impossible for me to overemphasize the importance of the Selective Reenlistment Bonus (SRB) and other special pays in our retention program. The cost of these programs is insignificant in comparison to the payoff they provide in creating the proper climate for retention of petty officers with vital skills and experience. Figure Eight provides a particularly telling picture of the need to protect our mission-critical ratings. You will note that in comparison with their non-critical skill shipmates, these people fail to meet career force objectives at twice the rate; they stay at sea 80 percent more of the time; they are twice as high in demand in the private sector; and they cost twice as much to train. The Selective Reenlistment Bonus is an

FIGURE EIGHT

COMPARISON OF RATINGS CRITICAL TO READINESS WITH ALL OTHER NAVY RATINGS



exceptionally effective management tool to correct shortages in vital skill ratings as they develop without waiting for the lengthy review process involved in approving new funding programs or management authority. Management flexibility, proven results in retention and enhanced material readiness, and the relatively small cost of the Selective Reenlistment Bonus make it a very cost-effective program and worthy of Congressional support. Past Congressional action raising the SRB ceiling to $30,000 has improved retention in those mission essential ratings receiving the enhanced bonuses. However, the Congressional restriction that no more than ten percent of bonuses exceed $20,000 will prevent us from attaining the full potential benefit from this important retention tool. In this connection, nuclear ratings which must have the new top dollar bonuses constitute 8-1/2 percent of the 10 percent limit, thereby providing little flexibility for other critical skills. I, therefore, urge you to remove the SRB ceiling restrictions or at least change the constraint from 10 to 25 percent.

Our most serious manpower problem is the growing shortage of experienced nuclear qualified officers (Lieutenant Commander through Captain). These officers are required for at sea Department Heads, Executive Officers, and Commanding Officers; and for key shore billets directly supporting fleet readiness and nuclear propulsion plant safety. With inventory 18 percent short of requirements at the end of FY 84, sea billets are kept filled by extending sea tour lengths and assigning most officers back-to-back sea tours. Some critical shore billets are not manned. Unless corrected, the experienced nuclear officer shortage will grow to 21 percent by FY 87.

Of equal concern is the critical inventory shortfall of experienced post-command submarine officers, which is projected to grow from four percent in FY 84 to 22 percent in FY 90. These officers are essential for manning major sea command billets (TRIDENT submarines, submarine tenders, and submarine squadrons). Additionally, their expertise is indispensible in key shore billets involving submarine force operation and safety, strategic planning, tactical development, and program management. We are submitting urgently needed legislative proposals, which modify Nuclear Officer Incentive Pay and Submarine Duty Incentive Pay, to target these essential experienced officers.

A comparison of officer retention rates for 1983 and 1984 is shown in Table Two. Pilot retention dropped two percent. Nuclear submarine retention rose only one percent, 13 percent below required retention for that community. Unfortunately, we have begun to see the first indications of a reversal of the very

TABLE TWO

OFFICER RETENTION

FY 82

	ELIG TO RETAIN	RETENTION GOAL	ACTUAL RETAINED
SURFACE WARFARE	1032	49%	440 (43%)
PILOT	919	45%	454 (49%)
NAVAL FLIGHT OFFICER	405	68%	295 (73%)
NUCLEAR SUBMARINE	319	37%	123 (39%)
GENERAL UNRESTRICTED LINE	212	45%	94 (44%)

FY 83

	ELIG TO RETAIN	RETENTION GOAL	ACTUAL RETAINED
SURFACE WARFARE	1065	44%	473 (44%)
PILOT	777	56%	450 (58%)
NAVAL FLIGHT OFFICER	281	73%	207 (74%)
NUCLEAR SUBMARINE	292	42%	135 (46%)
GENERAL UNRESTRICTED LINE	251	54%	151 (60%)

FY 84

	ELIG TO RETAIN	RETENTION GOAL	ACTUAL RETAINED
SURFACE WARFARE	1164	47%	583 (50%)
PILOT	647	60%	364 (56%)
NAVAL FLIGHT OFFICER	145	79%	117 (81%)
NUCLEAR SUBMARINE	343	51%	161 (47%)
GENERAL UNRESTRICTED LINE	294	56%	172 (59%)

FY 85

	ELIG TO RETAIN	RETENTION GOAL	PROJECTED RETENTION
SURFACE WARFARE	1160	49%	549 (47%)
PILOT	647	60%	349 (54%)
NAVAL FLIGHT OFFICER	389	75%	243 (62%)
NUCLEAR SUBMARINE	370	55%	175 (47%)
GENERAL UNRESTRICTED LINE	356	60%	220 (62%)

positive trend in officer retention begun in 1981 by Congressional programs to restore the purchasing power of military pay. The number of officers submitting letters of resignation in 1984 stating a request to resign in 1985 rose dramatically (Pilots: 188 to 328; Nuclear Submariners: 211 to 279; Surface Officers: 385 to 459). Reasons for the recent increases in officer resignations are many: eroding pay value, improving economy, lower rates of unemployment, and increased hiring by civilian industries.

To halt these negative trends in critical officer skill inventories, I urgently request your support for our proposals to enhance Nuclear Officer Incentive Pay, extend authority for Aviation Officer Continuation Pay, and improve targeting of Submarine Duty Incentive Pay.

Because of capped and delayed pay raises in FY 84 and FY 85, all naval personnel, not just the officer communities discussed above, have seen the purchasing power of their income erode. As I pointed out earlier, young Americans today demand the opportunity for upward mobility and economic advancement; if they do not find it in the Armed Forces, they will seek it elsewhere. We have recently begun to see the first signs of their seeking it elsewhere. To stem this trend before it fully develops, I most strongly encourage the Congress to support the DOD military pay raise request.

In addition to ensuring that military basic pay remains comparable with the private sector, I also solicit your support for the personnel related initiatives in the FY 86 budget which include: adequate travel and transportation reimbursements, provision of dependent dental care, amendment of the Defense Officer Personnel Management Act (DOPMA), and adequate funding of the Permanent Change of Station (PCS) account.

Additionally, I must express my concern over an IRS proposal that would, in effect, tax the presently non-taxable housing allowance of military personnel who live in homes they own. Indeed, such an action would be counter to a 1925 U.S. Court of

Claims decision exempting military allowances from taxation and contrary to the spirit and letter of Congressional military compensation acts dating from 1965 which incorporate income tax advantages as a part of military pay levels. The impact of adopting the IRS tax policy would be that about 300,000 military homeowners would suffer a three to seven percent pay cut. Such a policy, if adopted, would have an immediate and drastic impact on our retention efforts, and, hence, our readiness. I strongly solicit your support to maintain the existing and long-standing tax policy regarding military homeowners. It is fundamental to the military total compensation system and should never be addressed in isolation as some propose.

Military retirement benefits are another particularly important tool which supports our retention efforts and help in recruiting. In survey after survey of Navy men and women, retirement benefits are mentioned as figuring prominently in the decision to reenlist. Conversely, many of our sailors who decide not to reenlist cite uncertainty over the future of retirement benefits as a factor in their decision to leave the Navy. I cannot emphasize strongly enough the importance of the military retirement program. I encourage you to make it clear early in the Congressional year that there will be no changes to that system that would take away benefits earned in good faith.

The contributions of civilians to readiness is crucial. The removal of civilian end-strength controls by Congress last year provides us the opportunity to be more efficient and economical in managing our civilian manpower resources, over half of which are dedicated to shore support efforts and directly related to our operational readiness posture. This action enhances our ability to respond to unexpected workload demands; allows us to devote more attention to employee training, thereby contributing to higher retention of skilled personnel; and allows us to avoid turbulent and costly end-of-year terminations and rehiring procedures. I urge you to extend the waiver of civilian manpower controls. I also encourage you to allow us to target salaries to attract civilians with special education and skills, as we continue to have difficulty recruiting top quality civilian engineers. We need an alternative personnel management system for scientific and technical personnel in the Federal Government; one that will simplify the present federal personnel system and provide the flexibility we need to respond to changing salary demands. This approach has been demonstrated at two of our Navy Laboratories with considerable success. The substitution of broad pay bands for the present narrowly articulated civilian pay grades represents an important improvement in effectiveness and is a matter worthy of your consideration.

There is considerable speculation about changes in the civil service retirement system. Constructive changes are needed to put the system on a sound footing. We need your support to assure our civilians that we are fair employers and that changes will be equitable to those who have been faithful and competent employees of long standing.

Material

Material readiness complements personnel readiness in overall calculations of mission readiness. If equipment is not operating properly, the best efforts of our personnel will be of little consequence. Maintaining equipment in good material condition is a many faceted program including adequate supplies of the right parts, periodic overhauls and maintenance availability periods. In that respect, a ship or aircraft is

FIGURE NINE

SHIP MATERIAL READINESS IMPROVEMENT

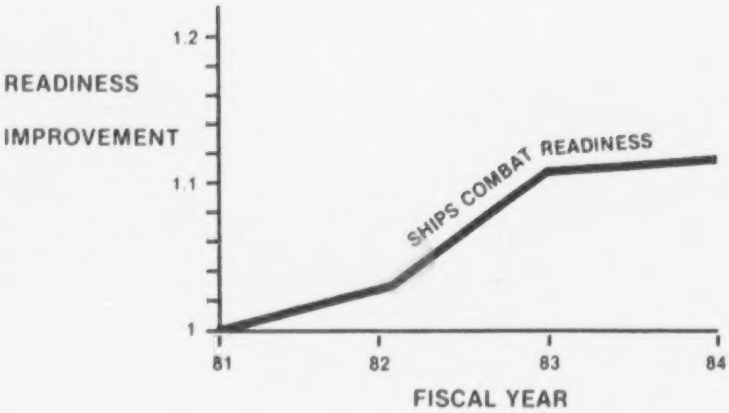
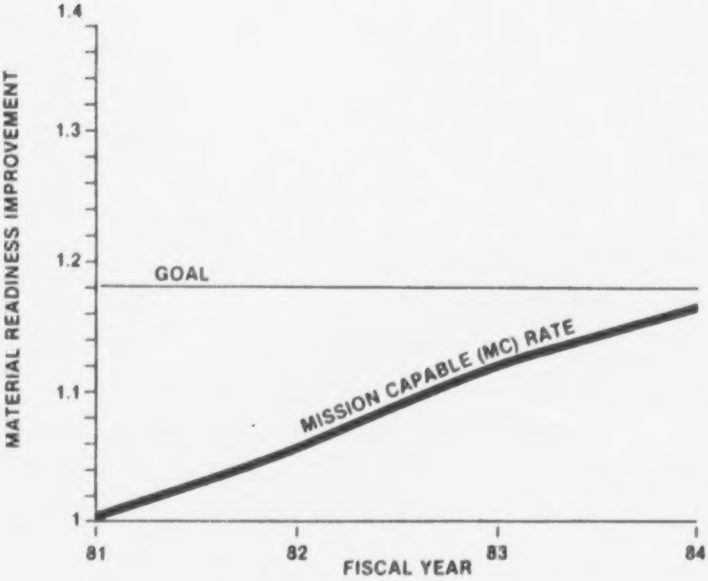


FIGURE TEN

AIRCRAFT SQUADRON

MATERIAL READINESS IMPROVEMENTS



just like your automobile; if you maintain it properly and at the right intervals, the engine starts when you turn the ignition key.

We have made a concerted effort to increase funding in support of material readiness. In addition to the dramatic increases in ship combat readiness shown in Figure Nine, aircraft mission capable rates, indicators which measure the level of personnel manning and training as well as funding for spare parts and equipment, continued to increase during the past year. As shown in Figure Ten, we are closing the gap on an important milestone--achievement of the long-standing force wide goal of 70 percent mission-capable aircraft. Indeed, we reached the 67 percent level last year and project attainment of the 70 percent goal this year.

The FY 86 budget request continues to emphasize improvement in all aspects of material readiness. Funding in the ship overhaul program has been increased to provide for the overhaul of 36 active and six reserve ships. Adequate Congressional funding to meet overhaul requirements and as well as our initiatives to extend the operating period between overhauls for our surface ships and submarines have eliminated the large backlogs we experienced in the past. Close, continual monitoring of equipment material readiness permits us to overhaul selected systems of ships during regular maintenance availabilities (two-three months) without assigning the ship to a shipyard for a year or longer. Our experience to date with nuclear attack submarines in this program is illustrative. These submarines were overhauled every 43 months; we now have extended that period to 84 months. In so doing, we saved approximately one billion dollars in maintenance cost and gained five percent more operational availability.

We have also taken action to control the cost of overhauls. We have developed standard work scopes for submarines which will be used to compare performance and promote competition between shipyards. Already several inefficient practices have been identified and corrected. I expect these initiatives to improve submarine overhaul and maintenance and help control cost.

We initiated several programs last year to improve material readiness and reduce costs in the aviation maintenance community. Let me mention one effort we are particularly pleased with: Aircraft Service Period Adjustment Program.

With respect to the Aircraft Service Period Adjustment (ASPA) Program, we share the concern expressed by previous

Congresses that airframe rework performed on a calendar basis did not adequately account for the actual condition of the aircraft. Accordingly, beginning 1 January 1984, we initiated several management changes. Almost every aircraft is inspected near the end of its operational service period. If the aircraft is in satisfactory condition, the rework requirement is deferred one year. At the end of the year, the aircraft is reinspected and reworked if not in satisfactory condition. The aricraft is grounded if insufficient funds are available for rework.

Experience with the ASPA program has been very positive with 209 aircraft deferred to date. Funded Standard Depot Level Maintenance slots were utilized to rework aircraft currently in the extension backlog. As a result, dollars were expended on aircraft most urgently in need of maintenance. If projections concerning deferral probabilities prove correct, the extension backlog will be eliminated by the end of FY 85.

Sustainability

As noted earlier, sustainability represents the "staying power" of a force. If readiness reflects the capability of the force to fight at the outset of a conflict, sustainability is the

FIGURE ELEVEN

TRENDS IN WEAPONS AT SEA

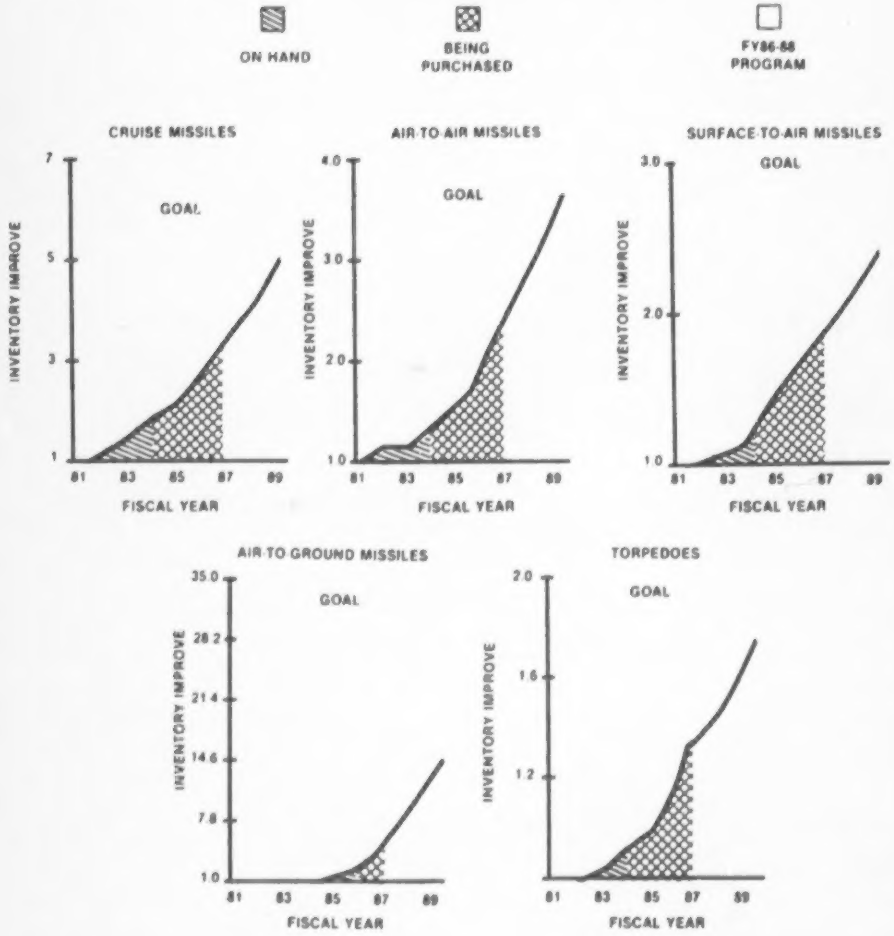
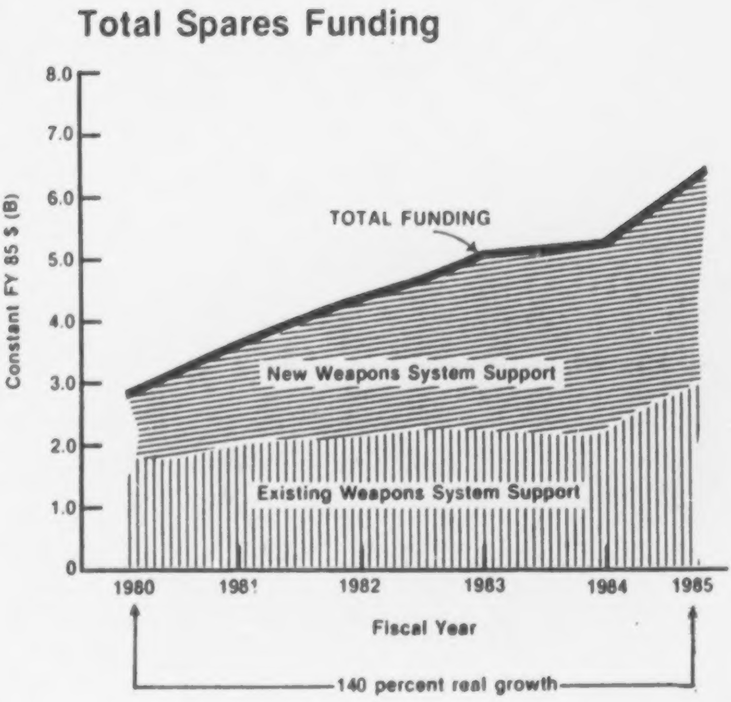


FIGURE TWELVE

TOTAL SPARES FUNDING



force's capability to continue fighting until objectives are met and favorable peace terms are attained.

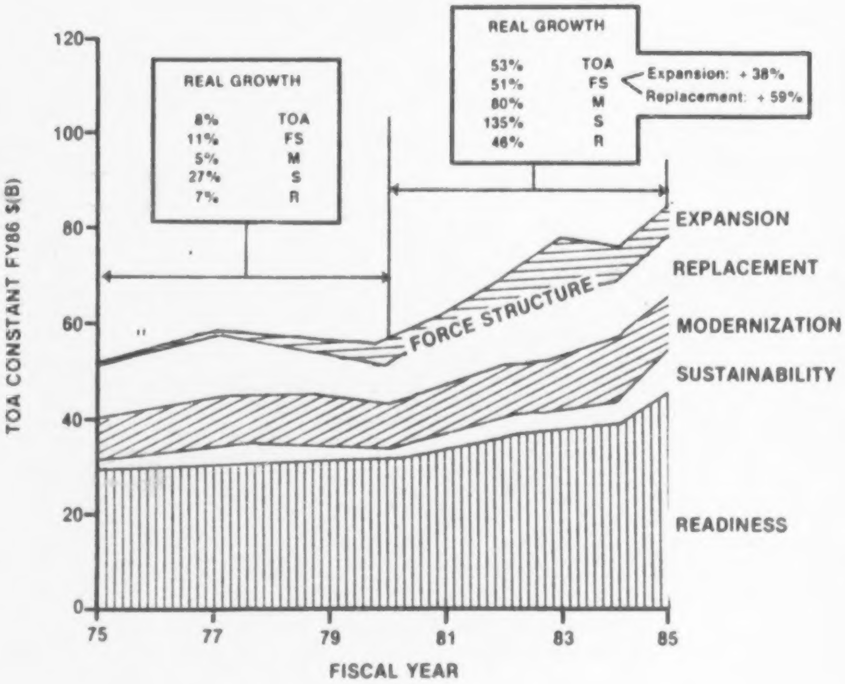
Reflecting fiscal and managerial emphasis, we have achieved impressive improvements in sustainability since 1981. Again, just in the case of readiness, sustainability improvements are based on empirical measurements, not subjective judgments. Some of the criteria used to measure sustainability are inventories of threat ordnance, number of days of Level of Effort (LOE) ordnance, amount of spare parts, number and readiness of Reserves, number of fleet hospital beds, etc. Figure Eleven, normalized to present our progress since 1981, shows dramatic increases in cruise missiles, air-to-air missiles, surface-to-air missiles, air-to-ground missiles, and torpedoes. Figure Twelve shows the emphasis we have placed on funding for spare parts.

We have made steady headway toward a sufficient level of in-theater medical health care and support; an important factor in sustainability. For example, in FY 83 we started procurement of 1500 fleet hospital beds and we had no hospital ships. By the end of FY 86, we will have begun procurement of over 5,000 fleet hospital beds. Our first hospital ship, USNS MERCY, will be commissioned next year and the second hospital ship, USNS COMFORT, will be commissioned in FY 87. We intend to continue

FIGURE THIRTEEN

NAVY TOA TREND

FOUR PILLARS TRENDS
NAVY TOA



the emphasis on in-theater health care and support including manpower, training, and military construction. We look forward to your continued support.

In 1980, sustainability accounted for just barely four percent of the Navy budget. That figure has more than doubled, with sustainability representing nearly ten percent of the FY 86 budget request. Looked at another way, sustainability funding between 1980 and 1986 will increase by 135 percent (real growth) while overall Navy TOA will increase by approximately 53 percent. As indicated in Figure Thirteen, sustainability funding has grown more than any of the other budget pillars between 1980 and 1986.

I particularly want to highlight the FY 86 request for the Navy Stock Fund War Reserve program. A portion of this request, $59 million, will be used for prepositioned material for the Reserve Mobile Construction Force. The major increase of $133 million for sustainability reflects Fleet Commanders' in Chief requests and achieves nearly full funding for the Department of Defense sustainability objective.

I must, however, report that cross-decking of some categories of weapons to complete load-outs for deploying forces was necessary in 1984. While the problem still exists, the cross-decking requirement has declined substantially and continued improvement is projected. Indeed, by 1989 the cross-decking requirement will be eliminated for combatants. This improvement reflects the fact that we have programmed approximately 60 percent of sustainability dollars for the purchase of ordnance.

Because funding for Reserve forces is a component of the sustainability pillar, I want to highlight several important programs in the FY 86 budget request which are essential in sustaining and further improving the effectiveness of the Naval Reserve.

As I mentioned earlier, the Sea and Air Mariner (SAM) program has been very successful in attracting non-prior service junior enlisted personnel for the Selected Reserves. An important tool for recruiting non-prior service critical skill personnel is the enlistment bonus and educational assistance program, the authority for which expires at the end of this fiscal year. The request for extension of that authority, at an increased level, is a high priority in the FY 86 program. The budget request also contains provisions for affiliation and reenlistment bonuses for recruiting and retaining prior service personnel for the Selected Reserve. In addition, we have proposed a unit incentive pay package to recognize the extra contribution made by Selected Reserve crew members of Naval Reserve Force ships. The TAR community has taken on new importance in the expanded Naval Reserve Force. To attract and retain enlisted TARs with critical skills, we are requesting authority for a TAR Selective Reenlistment Bonus.

Modernization

Modernization, approximately 20 percent of the FY-86 budget request, encompasses Research, Development, Test, and Evaluation (RDT&E), SHIPALTS, and aircraft and weapons modifications. A balanced program must allocate sufficient funding to the modernization pillar to ensure that the Navy of the future will remain capable of dealing with the projected threat. Modernization is second only to sustainability in the rate of real growth between 1980 and 1986 in the Navy budget. During this period, modernization funding increases at a rate of 80 percent. Indeed, the most significant real program growth in the FY 86 request over FY 85 occurs in RDT&E.

Why have we placed this type of emphasis on modernization? The answer is clear. While we have the most capable Navy in the world, we must ensure that it keeps pace with advances in technology, or we soon will fall behind. Our principal and most threatening potential adversary, the Soviet Union, has a decided numerical advantage. The Soviet submarine threat, in particular, is dramatically increasing in numbers and quietness. We offset that quantitative disadvantage by qualitative superiority. Qualitative superiority is made possible only through continuing efforts at fleet modernization.

Research and development provides the foundation for fleet modernization. Successful results of many research and development programs are now entering the fleet and improving capability across the board. The FY 86 budget request continues to stress research and development and builds on Congressional support of these efforts in the FY 85 budget. The FY 86 budget request provides 4.5 ~~3.6~~ percent real growth over FY 85 in the vital technology base area. The technology base program has been adjusted to allow eight percent real growth per year after FY 86. Strategic programs in our RDT&E request include TRIDENT II, while key tactical programs are JVX, A-6 Upgrade, F-14D, SUBACS, SSN-21, DDG-51, New Threat Upgrade, MK 50 Advanced Lightweight Torpedo, Surface Ship Torpedo Defense, and the Five Inch Rolling Airframe Missile.

The new design SSN, SSN-21, represents a significant improvement in submarine tactical capabilities, including optimized quieting, higher tactical speed, better sensors, more effective combat systems, greater firepower and an Arctic warfare capability. These programs are absolutely essential to ensuring our continued qualitative superiority over the Soviets.

Several other programs in the FY-86 modernization request hold special significance. We plan to install the Vertical Launch System (VLS) in the TICONDEROGA class cruisers beginning with the sixth ship and in all ARLEIGH BURKE class destroyers. Additionally, we have programmed funds to place VLS in DD-963, and SSN-688 class ships. The importance of VLS is hard to overemphasize. The flexibility of weapons load-out which VLS provides and the attendant reduction in launcher system maintenance requirements is extraordinary.

The MK-48 Advanced Capabilities (ADCAP) Torpedo program remains essential to ensure the continuation of our key anti-submarine warfare advantage over a vastly and rapidly improving Soviet submarine threat. Equally important in maintaining and extending our ASW advantage are the SH-3H carrier helicopter replacement, SSN-688 improvement, SQS-53B/C sonar and the LAMPS

MK III ASW helicopter. Vigorous research initiatives are underway to ensure that we retain our superiority in ASW.

Installation of New Threat Upgrade (NTU) in selected pre-AEGIS TERRIER and TARTAR guided missile ships will provide critically needed near-term battle group assets to counter air and cruise missile threats as we transition to AEGIS-equipped TICONDEROGA class cruisers and ARLEIGH BURKE class destroyers. The New Threat Upgrade system improves surveillance and target tracking performance and provides SM-2 Block II surface-to-air missile capability in these ships. The New Threat Upgrade/SM-2 Block II combat system enables us to engage more targets simultaneously at ranges two to three times greater than that of the SM-1 missile. These modernization improvements are significant, much needed, and will provide an affordable threat response until AEGIS ships are available in sufficient numbers.

The FY 86 modernization of the amphibious forces continues with funding for a three ship multi-year procurement of the LHD-1 class ship. These ships represent the cornerstone of our plan to expand amphibious lift capabilities and typify the new character of amphibious warfare as it transitions to an over-the-horizon capability. Similar in design to LHA class ships, the LHD provides large spaces for transporting troops, vehicles, and cargo in amphibious assault. It has the ability to carry three Air-Cushion Landing Craft and many helicopters. The LHD-1 also is capable of supporting V/STOL aircraft and can be used, if required, as a substitute for our large deck aircraft carriers.

Although qualitative and quantitative gains in ships, aircraft, and weapons are central to maintaining our present edge, the total effectiveness of these forces can be no better than the command, control, and communications systems we rely on as the sensor-to-shooter links necessary for coordinated long range operations. Thus, the FY 86 budget request also contains several important command and control modernization programs which will enhance our capability to direct naval forces and their weapons in accordance with a timely and accurate tactical picture derived from multiple sensors. These programs include: Relocatable Over-the-Horizon Radar (R-OTHR), Advanced Combat Direction System (ACDS), Joint Tactical Information Distribution System (JTDS), Anti-Jam High Frequency Radio, and the tri-service/NATO interoperable MK XV Combat Identification System. Joined with command/control capabilities already in place, these developments complete an integrated information system to facilitate both coordinated defense of our naval forces and targeting at over-the-horizon ranges. Finally, the Navy continues to make major investments in cryptographic security equipments to protect our communications against technical and tactical exploitation by our adversaries.

FY 86 Force Levels

We learn many lessons from at-sea exercises and war games at the Naval War College. One of the lessons which came through clearly at the Global War Game held at the Naval War College in Newport last summer was that while it is important to have a sufficient supply of conventional ordnance for a protracted war, it is equally important to have sufficient numbers of aircraft and ships to deliver the ordnance on enemy targets during a protracted war.

A balanced program must include funding for an adequate number of ships and aircraft. Our FY 86 force structure request is $18.5 billion or 21 percent of the requested TOA. This includes funding for 23 new ships and five conversions of existing ships. New construction includes one TRIDENT submarine, four LOS ANGELES class attack submarines, three TICONDEROGA class cruisers, four MCM-1 class ships, four MSH-1 class ships, two LSD-41 class amphibious ships, one LHD-1 class ship, two TAO-187 class ships, and two TAGOS class ships. Our first TAGOS ships, USNS STALWART (T-AGOS-1) and USNS CONTENDER (T-AGOS-7) recently completed very successful certification trials in both the Atlantic and Pacific. These mobile ASW surveillance system ships are important complements to our fixed surveillance systems and will enhance our ability to posture forces to deal with changes in Soviet submarine deployment patterns.

Aircraft procurement for FY 86 will maintain inventories matched to force levels, with 322 total aircraft requested. FY 86 is the last procurement year for the F-14A (18 aircraft) with the TF-30-P-414A engine. Beginning with FY 87, the F-14A will have an operationally superior engine, the GE F-110. FY 86 marks the first production year of the CH/MH-53E proposed multi-year program. Four CH-53Es and 10 MH-53Es are planned for the initial year of production. The MH-53E will be the mainstay of our airborne mine countermeasures force, replacing the older and less capable RH-53D. Also, beginning with FY 86, the E-2C will receive the upgraded T56-A-427 engine which will improve flight safety and provide power for increased weight.

Important new start items in the FY 86 aircraft modification program include the modification to integrate the HARM missile into the A-6, procurement of a new intercommunications system (ICS) replacement for the S-3 aircraft, and incorporation of survivability and vulnerability improvements in several combat aircraft. Some important on-going aircraft modification programs in FY 86 include: A-6 TRAM, structural and TF-30 engine improvements in the F-14, H-46 Safety, Reliability, and Maintainability Update, H-3 SLEP, S-3 Weapon System Improvements, and ALQ-126B kit procurement.

After thorough review, we have decided to proceed with the E-6A as the replacement for EC-130 TACAMO aircraft. This highly capable platform will permit connectivity with TRIDENT submarines throughout the broad ocean area and will assure survivability of this vital strategic communication link in the face of a growing threat.

The naval aircraft procurement and modernization programs have been carefully considered and balanced to satisfy our needs to support 15 carrier battle groups and 14 active deployable air wings. Two upgraded Naval Reserve airwings will meet mobilization requirements by filling the deck of the fifteenth carrier and the carrier undergoing SLEP.

Conclusion

We pray for an orderly and peaceful world where wisdom and judgment prevail and the condition which I call "violent peace" becomes little more than a memory. Regrettably, I fear we must anticipate a continuation of the unrest and low level conflict which has characterized this decade. Terrorist acts, in all likelihood, will continue and be more destructive, more violent, and more frequent in occurrence. Continued economic deterioration in the Third World could lead to even greater instability.

If the past provides insight for the future, we must anticipate that the Navy will be the instrument most often employed by the National Command Authority both in response to emergent crises and pro-actively as a deterrent to prevent crises from occurring. In either case, the Navy will be responsible to prevent the escalation of violence and reduce the probability of events leading to superpower confrontation. Today, as a result of your support, the Navy is fully prepared for such contingencies.

As the United States transitions to a defense-oriented strategic deterrence posture, our ballistic missile submarine force will be crucial to strategic nuclear stability. Moreover, the conventional deterrence provided by ready and capable naval forces forward deployed to areas of U.S. vital interests will foster continued solidarity with our allies and deny the Soviets any hope of achieving their goals through a major conventional conflict.

The FY 86 Navy budget request has been carefully prepared to ensure our readiness to fulfill national security objectives. The budget gives us the capability to maintain deterrence across the spectrum of conflict from crisis response to global war with a high level of confidence.

Because of your support in restoring this nation's naval muscle, and our constant efforts to reduce costs and increase efficiency, less fiscal growth is required during the second half of the decade. We need only slightly more than half the growth required during the first half of the decade. The program which we have proposed will maintain the maritime superiority so essential to our national security.

The Navy's role in maintaining national security while deterring conflict will remain crucial in the unstable, violent world in which we live. We recognize our unique responsibilities in deterring violence across the spectrum of conflict and controlling escalation when conflict occurs. We are prepared to respond to the challenges we surely will face. The support of the Congress and the American people, coupled with the selfless professionalism of the men and women in Naval uniform who give 110 percent everyday, guarantee that the Navy will continue to be at-sea, underway, helping to protect and preserve the ideals cherished by the people of this great nation.

APPENDIX

1. SUMMARY OF U.S. NAVAL FORCES

(As of 1 January 1985)

	STRATEGIC FORCES	
SSBN		36
SUPPORT		6
	SUBTOTAL	42
	TOTAL STRATEGIC FORCES	42
	BATTLE FORCES	
AIRCRAFT CARRIERS		9
CVN		4
	SUBTOTAL	13
	SURFACE COMBATANTS	
BB		2
CG		20
CGN		9
DD		31
DDG		37
FF		53
FFG		44
	SUBTOTAL	196
	SUBMARINES	
SS		4
SSN		95
	SUBTOTAL	99
AMPHIBIOUS WARFARE		59
MOBILE LOGISTIC SHIPS		53
PATROL COMBATANTS		6
MINE WARFARE		3
	SUBTOTAL	121
TOTAL BATTLE FORCES		429
	SUPPORT FORCES	
MOBILE LOGISTIC		21
SUPPORT SHIPS		25
	SUBTOTAL	46
TOTAL SUPPORT FORCES		46
	MOBILIZATION FORCES (CATEGORY A)	
SURFACE COMBATANTS (DD/FF/FFG)		10
AMPHIBIOUS WARFARE SHIPS		2
	SUBTOTAL	12
TOTAL MOBILIZATION FORCES		12
TOTAL U.S. NAVAL FORCES		529

NAVY AIRCRAFT

STRIKE FIGHTER	[illegible]
FIGHTER	478
ATTACK	1284
ANTI-SUBMARINE	568
PATROL	427
WARNING	146
TRANSPORT	138
INFLIGHT REFUELING	[illegible]
TRAINERS	1156
SPECIAL MISSION	5
OBSERVATION	44
UTILITY	114
HELICOPTERS	[illegible]
DRONES	79
TOTAL AIRCRAFT	6003

2. NAVY FIVE YEAR SHIP CONSTRUCTION/CONVERSION PLAN

	FY 86	FY 87	FY 88	FY 89	FY 90
A. NEW CONSTRUCTION					
TRIDENT	1	1	1	1	1
SSN 688	4	4	4	2	4
SSN 21				1	
CG 47	3	3	3	2	
DDG 51		2	5	5	5
LSD 41	2				
LHD 1	1		1	1	1
LSD 41 (VAR)			2	2	2
MCM	4	1			
MSH 1	4	4	4	4	
AR					1
TAO 187	2	2	2	2	2
TAGOS	2	2			
TAGS					
AE			1	1	1
AOE 6		1	1	1	1
AFDM			1		1
TOTAL UNITS	23	20	25	22	19

B. SLEPs, CONVERSIONS, AND REACTIVATIONS

	FY 86	FY 87	FY 88	FY 89	FY 90
LPD 4 SLEP			1	3	3
CV SLEP		1			1
BB REACT		1			
AO JUMBO			1	2	2
TAVB (Conv)	1				
TAGS (Conv)	3	2	2		
AG (Conv)	1				
TOTAL UNITS	5	4	4	5	6

3. NAVY FIVE YEAR AIRCRAFT PROCUREMENT PLAN

TYPE	FY 86	FY 87	FY 88	FY 89	FY 90
A-6E/F	6	6	12	12	12
EA-6B	12	12	9	9	9
AV-8B	46	47	48	50	35
F-14A/D	18	18	12	24	24
F/A-18	84	102	120	122	148
[illegible] 53E	14	14	14	14	11
[illegible]	22			—	—
SH-60B	18	18	18	18	18
[illegible] HELO		7	24	30	30
P-3C	9	9	8	8	8
[illegible] 3D	—	—		1	1
[illegible]		—	—	18	42
[illegible]	3	6	6	6	6
[illegible]	6	—	—	—	—
[illegible]		—	—	—	—
[illegible] 12B	12	12		—	—
[illegible]	8	3	—	—	—
[illegible]	[illegible]	[illegible]			[illegible]
[illegible]		15		—	—
ADVERSARY	12	—	—	—	—
T-45A			12	24	24
[illegible]		—		—	—
[illegible]	[illegible]	4	4	2	—
[illegible] IGT		—	—	—	—
[illegible]	9	—		—	—
[illegible]		—		—	—
TOTAL UNITS	322	320	300	300	306

The CHAIRMAN. Thank you, Admiral.

General Kelley.

STATEMENT OF GEN. P.X. KELLEY, COMMANDANT OF THE MARINE CORPS

General KELLEY. Thank you, Mr. Chairman.

I truly appreciate your comments on the retirement benefits. These will be most encouraging to all of those sailors and marines who are out on long deployments away from their families and who develop these concerns when they read about such things in the newspapers.

I thank you for these and all of your other kind remarks. We have submitted to you this year our traditional "biggest-bang-for-the-buck" budget. I will quit right now, while I am ahead, and stand ready to answer your questions.

[The prepared statement of General Kelley follows:]

STATEMENT OF GEN. P.X. KELLEY, COMMANDANT OF THE MARINE CORPS

Mr. Chairman, distinguished members of the Committee: It is again my privilege to report to you on the current and future posture of your United States Marine Corps.

Before I begin, I wish to thank the members of the Committee and the entire Congress for the support given to the Marine Corps during the past year. Thanks to you, our combat readiness has never been better. The Corps is well trained, equipped, and supplied for the most demanding of assignments—from low intensity conflict (including countering state-sponsored terrorism) to high intensity, large scale, global commitments. With your continued support the Marine Corps will maintain and hone this readiness and our unique capability to respond to national security needs across the entire spectrum of conflict. The presence of amphibious forces, either routinely deployed or in response to a crisis, provides visible, measured support to deter or prevent escalation of a crisis in support of national policy objectives. Should subsequent force be required, Marines are prepared to rapidly provide the measured response directed.

Fiscal realities, driven by national economic priorities, will require tough congressional decisions this year. It is my intention, as I report to you today on the current posture of the Marine Corps, to assure you that I remain dedicated to providing sound, accountable stewardship of those resources entrusted to the Marine Corps.

I would emphasize that, measured in terms of structure, training, equipment, mobility, readiness, sustainability, and the positive attitude of the individual Marine, the Corps provides the national defense effort a capable, ready, and flexible resource.

This flexible and responsive capability is unique to the Navy-Marine Corps team. It is unique in the sense that Navy and Marine combat-ready air, ground, and sea forces are routinely forward-deployed around the world. A Marine Air-Ground Task Force (MAGTF) can be tailored for any mission and will vary in size from a Marine Amphibious Unit (MAU) of approximately 2,000 Marines—the type employed in Grenada—to a Marine Amphibious Force (MAF) of about 50,000 Marines. The Grenada example demonstrates the flexibility of the maritime forces and their "no-warning" response capability.

Our vast overseas national interests are assuming an increasingly important role in the interdependent western economic system. These interests are vital to our economic and national security. Continued Soviet military adventurism, their cynical use of surrogates, and the spread of state-supported terrorism, coupled with an increasingly complex international political environment, increase the value of forward-deployed Navy-Marine Corps forces. Through rapid repositioning, Navy and Marine amphibious forces can send a clear, controlled signal of U.S. resolve to both friend and foe.

U.S. maritime strategy reflects the maritime character of our nation and supports protection of our legitimate national interests. The Navy-Marine Corps team works and trains together to provide the capability to establish maritime control whenever and wherever required. I can assure you that, with the support of the Congress and the American people, the Navy-Marine Corps team will continue to provide this capability.

COUNTERING TERRORISM

Because of its growing threat, early in my remarks I would like to address state-sponsored terrorism. Terrorism constitutes a new dimension in warfare which will be with us for the foreseeable future. The Marine Corps recognizes that this threat requires the development of unique skills necessary for its defeat. We have turned much of our energies toward establishing a thorough, innovative program to effectively combat terrorism. Let me tell you about our program. The objectives are to have every Marine thoroughly aware of the terrorist threat, realistically trained and educated in how to counter that threat, and armed with the best doctrine, tactics, and equipment we can produce. In addition, efforts are being made to provide our field commanders timely, accurate intelligence concerning terrorist activity and to establish the level of tight security required to deter terrorist attacks against Marine Corps installations, facilities, and deployed units.

Our program consists of a series of completed and ongoing actions that come under seven program areas. The first of these areas is monitoring and coordination. Actions in this category provide centralized control at the Headquarters Marine Corps level and each major subordinate command. We have established the agencies, focal points, and working groups required to efficiently and effectively implement the measures that make up our program, monitor their progress, and provide the field commander the assistance and expertise he may need to develop his security plan.

The second program area is the continuing review and study of the terrorist threat and of our capability to counter it. We have attempted, through a variety of efforts, to make a complete examination of what we are up against and to make an honest assessment of our current capabilities to deal with it. It is clear that this process must be dynamic to combat a constantly changing threat, and we must remain capable of anticipating changes and quickly adjusting tactics, techniques, weapons, and threat locations.

Obviously, any ability to counter the terrorist threat must begin with accurate, timely intelligence. Intelligence is our third program area. Within our Intelligence Division, we have established a Terrorist Threat Section which gives us a direct interface with other intelligence agencies addressing terrorism. This Section provides our commanders with the analysis, specific threat reports, and on-site assistance needed to build their local security plans. The Terrorist Threat Section attempts to identify specific threats to Marine Corps personnel or installations and provide timely information, recommendations, and intelligence assistance to the threatened command or region.

In physical security, our fourth program area, we have formally reviewed Marine Corps security requirements for each of our installations and units, and initiated a security upgrade of our facilities. Security enhancements include publishing a new physical security and crime prevention manual, acquiring security equipment and dogs, enhancing military police training, and preparing detailed local security and crisis management plans.

Training and education, our fifth area, is the cornerstone of our program to combat terrorism. An aware, alert, well trained Marine is the key to defeating the terrorist. We have initiated actions in our formal schools and recruit depots to significantly increase instruction on combatting terrorism. Additionally, we have introduced correspondence courses, video tapes, films, war games, and mobile training teams to further enhance our training.

Through our sixth program area, we are providing the doctrine, tactics, and techniques necessary for our Marines and their commanders to fight the terrorist. Our new publications will range from policy and guidance for the commander and his staff to the "how to fight" techniques for the Marine on the ground facing the threat. In this regard, we are making full use of members of the Marine Corps Reserve who have special skills and talents in the areas of security and countering terrorism.

In our final program area, operational capability, we have enhanced our ability to operate in a terrorist environment by making certain organizational adjustments, particularly in our security forces, and by establishing and publishing an operational standard to evaluate our units' capabilities. Our operating forces will be provided the security expertise and equipment to enable them to conduct operations at any level of conflict, while retaining the ability to deal with the added threat of terrorist activity.

The Marine Corps is committed to defeating terrorism, rather than coping with it or "weathering it out" as a passing storm. We intend to prove to enemies that terrorism is too costly a tactic to adopt against Marines.

MODERNIZATION/STRENGTHENING PROGRAMS

I would like to move on to more conventional and familiar matters at this point and briefly review our major modernization programs.

The Department of the Navy (DON) has embarked upon a balanced shipbuilding program designed to meet the Defense Guidance objective of sufficient ships to simultaneously lift the assault echelons of a MAF and a MAB. The current Navy shipbuilding plan will fully meet the Marine Corps stabilized lift requirement by FY94.

The program for our most capable amphibious ship, the amphibious assault ship (multipurpose), LHD 1 (WASP) class, is well underway. Keel laying for the USS WASP will be in August. The LHD 1 class is the linchpin to meeting overall Defense Guidance lift objectives. Accordingly, we fully support the Navy request for advance funding for three more of these superb ships.

The lead ships of the LSD 41 class (LSD 41, 42, 43) are invaluable additions to the Nation's amphibious capability. USS WHIDBEY ISLAND (LSD 41) was recently commissioned; USS GERMANTOWN (LSD 42) was launched in June of last year; and LSD 43, as yet unnamed, is scheduled for launch in December of this year. Three additional LSD 41 class ships have been authorized, with plans for two more in this year's defense appropriations request. A derivative class of amphibious ship, based on the LSD 41 hull and optimized for cargo lift, is being developed by the Navy. Additionally, although not a new construction effort, the LPD 4 class of 11 ships is scheduled for a service life extension which will provide an additional 15 years of service life for these very capable ships.

Coupled with the delivery of the LCAC, which I will address in more detail shortly, and the LSD 41s, introduction of the LHD provides the Nation's amphibious forces the opportunity to advance and further refine evolving techniques for the over-the-horizon (OTH) launch option of amphibious forces. The OTH launch will be one of the keystones of successful amphibious warfare in the future.

In addition to the sealift capability provided by naval amphibious shipping, a competitive, healthy merchant marine fleet is essential to the structure of a strong national maritime strategy. Although the existing merchant fleet is being modernized, its size, when considered in the context of supporting a defensive global strategy, causes concern. The Marine Corps strongly supports Congressional initiatives to expand the merchant fleet which concomitantly enhances the national capability to support projection of maritime power.

The Maritime Pre-positioning Ships (MPS) concept, the most important and innovative of our crisis-response enhancements, is now a reality. The MPS program represents a significant new dimension in mobility, readiness enhancement, and global response. When national interests are threatened, an MPS squadron can rapidly alter course or get underway to arrive in the crisis area in a matter of days. The strength of the signal of U.S. intent and resolve can be controlled by adjusting the visibility of the MPS squadron. When directed, Marines would be airlifted to the crisis area to marry-up with their equipment and supplies to carry out a variety of missions. I am a firm believer that an ounce of prevention is worth a pound of cure and that when you have the ability to quickly move a 16,500-man Marine brigade to a crisis area, you have a ready-made prescription to prevent that crisis from escalating. MPS is just such a prescription. It provides a force of combined arms with 30 days of essential supplies, available on call. The MPS program is also a bonus for the private sector by assisting in revitalizing our shipbuilding industry and the merchant marine fleet which, in turn, enhances our sealift capability. We have already begun the loadout of the first MPS Brigade. The second MPS Brigade will become operational later this year and the third brigade by the end of CY 86. Construction has begun on all of the cargo ships to support the MPS program.

Beginning this calendar year, we will start exercising MPS forces. Selected elements of MPS 1 and 6th MAB intend to participate in conjunction with various fleet, allied, and JCS exercises. As our additional MPS sets become operational, the goal will be one JCS-directed exercise per MPS set each year involving in-stream and pier off-load, marshalling, recall, air movement, and depreservation/represervation techniques.

An important associated initiative is the Aviation Logistic Support Ship (TAVB) program. With either of two TAVB ships available, the aviation combat element of any MAGTF will be provided more rapid intermediate maintenance support once it arrives in the area of operations. The TAVB provides vital support for both helicopter and fixed-wing aircraft, through sealift of a partial, consolidated, intermediate maintenance activity to a theater of operations. This seaborne maintenance capability permits early introduction of landing force aviation which can expedite the early release of carrier battle groups to other sea control or force projection missions, if needed.

Another strategic mobility enhancement is our pre-positioning of selected equipment and supplies in Norway. By doing this we will reduce our response time to the critical northern flank of NATO from weeks to days. The Norway force, a MAB-sized unit, is a totally integrated, air-ground team under a single commander with a sustainability package specifically tailored for cold weather operations. It is a versatile, formidable force of approximately 13,000 Marines and sailors and over 150 aircraft. Since each MAB is task organized to accomplish the mission assigned, the Norway MAB meets the unique requirements of the Norway mission, and, consequently, is different from the previously mentioned MPS MAB. This Norway prepositioning program has been designed to provide rapid deployment to an area vital to America and her NATO allies. The program itself sends a clear signal of U.S. commitment and resolve without any requirement to post a single Marine on Norwegian soil. Commitment of the MAB can be accomplished quickly with a minimum of reliance on scarce, strategic airlift.

The pre-positioning necessary to make this rapid response work includes only what is mission essential and suitable for long-term storage. It is a pleasure to report that the Norway pre-positioning program is proceeding on course, and remains a top defense priority for the Norwegians who have stepped forward to provide an unprecedented level of support. Norway's contribution through host nation support has greatly reduced our total pre-positioning requirements. For example, the Norwegian unit assigned to support this MAB will include over 600 personnel and 370 vehicles.

In addition to our strategic mobility improvements, we have made significant strides with our tactical mobility programs, several of which I would like to briefly discuss. The first one is the Landing Craft Air Cushion (LCAC). Loaded on the LSD-41 and other well-deck ships, and launched from OTH, the 40-knot-capable LCAC, in conjunction with the helicopter, will reduce the risk to ships of the amphibious force while enhancing the surprise, mass, and maneuver of the assault forces. The first LCAC has been delivered to the Navy. The initial operational capability for the first six-craft detachment, to be homeported at Camp Pendleton, California, is 1986. A second LCAC support base is planned for Little Creek, Virginia. I am providing a synopsis of all our enhancement programs in Appendix I.

As a result of a service life extension program, we are both enhancing the operational capability of our LVTP-7 amphibious assault vehicles and extending their useful life. A future Landing Vehicle Tracked is being developed concurrently as the follow-on assault amphibian for the current LVT-7 family when it reaches the end of its service life in the late 1990's.

Complementing the improvements in surface lift capability, Marine Corps aviation has supported the development of the MV22A "Osprey." This tilt-rotor aircraft, known earlier as the JVX, will provide speed and efficiency to the assault and will be capable of lifting ground combat troops, small tactical vehicles, and anti-tank units. Replacing our aging fleet of assault transport helicopters in the 1990's, the Osprey can operate at speeds of 250 knots at vastly improved ranges. The CH-53E, the most powerful helicopter in the free world, complements the Osprey by providing the required heavylift capability into the 21st century. Its 16-ton lift capacity is necessary to enhance the operational mobility of the M198 155mm howitzer, the Light Armored Vehicle (LAV), as well as other MAGTF heavy equipment.

Tactical mobility improvements for our ground combat element focus on the acquisition and introduction of a new family of ground transport vehicles. The M939 series 5-ton tactical truck features an automatic transmission which will provide improved performance while simplifying driver training and maintenance. This program will be completed during FY87.

The 5/4-ton High Mobility Multipurpose Wheeled Vehicle (HMMWV) will be the primary tactical vehicle for combat and combat support units. Its functions will include troop and weapons transport; weapons platform; reconnaissance; fire support; medical evacuation; and command, control, and communications applications. This vehicle will replace most of the current 1/4-, 1/2-, 3/4-, and 5/4-ton trucks, as well as the 1/4-ton trailers. It satisfies the urgent requirement to replace current over-age vehicles and eliminates severe T/E and war reserve deficiencies. The fielding of the HMMWV will begin this year and continue through FY88.

The mobility enhancements, both strategic and tactical, provide Marines the means to get to, and around, the battlefield. This is only one aspect of the improvements being made to enhance the effectiveness of the Marine Corps. I would like to turn your attention now to our ground forces.

The reorganization of Marine Corps infantry battalions into more firepower-intensive units began in 1983. When reorganization is completed in May of this year, these battalions will have fewer personnel, but their organic firepower will be increased appreciably. This increase is the result of the acquisition of the improved M16A2 rifle, a new squad automatic weapon (SAW), an improved M60 machine gun, the MK19 40mm machine gun, the M2 .50 caliber machine gun, the Shoulder-Launched Multipurpose Assault Weapon (SMAW), and a new 60mm company mortar.

The Marine Corps' armor defeating capability is also being improved in every area. Each Marine division now has twice as many TOW II's, which are capable of defeating any known threat armor. The TOW II is equipped with a thermal night sight. The Dragon, Medium Anti-Armor System, which will also have a thermal night sight, is undergoing a product improvement development that was funded by the Congress beginning this year.

The LAV was developed to fill a requirement for increased firepower and tactical mobility within the Marine Corps. The LAV battalion will eventually contain eight configurations of the LAV. Six of these configurations, the LAV-25, LAV Recovery, LAV Mortar, LAV Command and Control, LAV Logistics, and LAV Antitank are under procurement. The other two mission-role vehicles, the LAV Air Defense and the LAV Assault Gun, are still in development.

The M60A1, the Marine Corps' main battle tank, is reaching the end of its service life. The M1A1 tank, which has been approved for service use as the replacement for the M60A1, will provide the Marine Corps state-of-the-art capability.

Our ground mine countermeasures capabilities are being upgraded with the addition of the Catapult Launched Fuel Air Explosive Mine Countermeasures System for the LVTP-7A1, the M58 Trailer-Mounted Line Charge, the track-width Mine Plow for use with a tank, and the M59 Mine Clearance System Kit used with the LVT-7A1 series.

The modernization of Marine Corps artillery is continuing. All towed artillery battalions in the Active force will be equipped with 155mm howitzers by the end of the fiscal year. The new M198 howitzers have been included in the pre-positioning programs. Additional procurement of M198's for the Reserves is planned for FY86-FY87. These howitzers will be used to equip the direct support battalions of the Reserve division. Additional self-propelled, 155mm batteries are being activated to improve the general support artillery capability through their mobility and survivability.

Target acquisition capability will be enhanced by the fielding of the AN/TPQ-36 counterfire radar during this year. An additional enhancement is the Navy and Marine Corps joint program for a remotely piloted vehicle (RPV) with a desired initial operational capability of FY88. An RPV unit will be located within each division and will provide the MAGTF with an accurate, medium-range target acquisition capability.

The Marine Corps has selected the Army's Battery Computer System as its battery-level, fire direction computer. Procurement of the Army system allows continued joint training and logistics support, as well as providing us improved responsiveness and accuracy of artillery fires.

The Marine Corps continues to improve its ability to operate in an NBC environment. The number of specially trained NBC personnel has been increased by 75 percent. Modernization is proceeding rapidly with procurement of new decontamination equipment, chemical detectors, and protective equipment. We will remain at risk, however, until improved chemical munitions are available to provide a credible retaliatory capability.

Improvements in the aviation element of the Marine Corps have kept pace with the ground. With the support of Congress, the introduction of the AV-8B into the Marine Corps will continue this year. This unique aircraft is compatible with our forward basing strategies and complements the flexible capabilities of our Marine Corps. The AV-8B eliminates the need for prepared airfields and reduces the required response time for close air support by virtue of its forward displacement. The AV-8B, with twice the range or payload of the AV-8A, builds on the proven concepts of VSTOL (Vertical and Short Take-off and Landing).

As our first AV-8B squadron becomes operational this year, we have confirmed a pressing need for a two-seat trainer version. The largest pilot transition requirement commences in FY87 and will continue for the next few years. The timely introduction of this trainer, the TAV-8B, is critical to the safe, efficient, and effective conversion of our remaining light attack force.

The Marine Corps, with the support of the DON, has undertaken an initiative to complement the nighttime capability of the A-6E. This attack enhancement program will be introduced first in the AV-8B and will include Forward Looking Infrared Radar (FLIR), night vision goggles, moving-map display, and image-enhanced heads-up display. This combination of systems will enable the pilot to detect, acquire, and destroy targets previously hidden by darkness.

Additionally, we are eagerly anticipating completion of the A-6E upgrade to the A-6F. This program promises enhanced capability, reliability, and survivability. Improvements in engines and radar systems will provide for the introduction of AAMRAM and Sidewinder missiles. Reliability and maintainability features designed to reduce maintenance manhours will be incorporated. Finally, heightened survivability will be achieved with increased weapons standoff, reduced systems vulnerability, and improved electronic countermeasures. This upgrade is essential to the development of enhanced deep strike, all weather, and reduced visibility capabilities of Marine Aviation.

The Marine Corps continues acceptance of the reliable and effective F/A-18. Our aircrews report that the F/A-18 is both a responsive and agile fighter, and a highly accurate attack platform. As we continue toward our ultimate goal of 12 F/A-18 squadrons, we will convert our fourth and fifth squadrons at MCAS Beaufort, South Carolina this year. Concurrently, two Marine F/A-18 squadrons will deploy this year aboard aircraft carriers as part of the Secretary of the Navy's interoperability initiative.

Another fighting improvement that we are investigating is the development of a two-seat, austere, all-weather version of the F/A-18. This two-seat version will feature decoupled cockpits, navigation FLIR, heads-down display, moving-map display, and night vision goggles.

During FY86, we will accept the first installment of our two-year buy of 44 AH-1T+ attack helicopters. The procurement of the AH-1T+'s enables the Marine Corps to reduce existing inventory shortfalls as well as upgrade its capability. The incorporation of the T-700 engine in the AH-1T+ provides Marine attack helicopters the ability to operate anywhere in the world. The Hellfire missile system will become operational with the introduction of the AH-1T+ as well as other ordnance capabilities which include TOW, Sidewinder, and Sidearm missiles. Finally, a night enhancement capability will also be inherent with the AH-1T+. This effort includes night vision goggles with compatible cockpit lighting.

As a result of continuing Congressional support, Marine Corps firepower in the form of air-delivered ordnance has improved. Laser Maverick procurement continues with a funding request for 1500 missiles in FY86. This missile provides an effective air-delivered, ground or air target-designated laser munition required in the close air support role. Also, procurement of the Hellfire missile will provide extraordinary point target accuracy and increased platform survivability. The significant stand-off range increase over our present capabilities enhances the survivability of the launching platform. Another low-cost initiative for the attack helicopter and AV-8B force is the Sidearm anti-radiation missile which is achieved by retrofitting existing AIM-9C missiles with an anti-radiation guidance group.

Marine Corps Aviation experienced a banner year in 1984. We flew more hours than any year since the Vietnam War, and our safety record was the best it has ever been. In addition to replacing many of our aircraft with more capable and reliable planes, we are flying more hours safely.

Naval Surface Fire Support (NSFS) continues as a vital component of the naval power projection equation. Future concepts will not diminish the need for adequate NSFS. Support of tactical options ranging from OTH launch to the more conventional assault may require certain naval surface fire support systems to be able to hit targets at ranges in excess of 100 kilometers.

The present inventory of NSFS platforms is deficient both in range and lethality due to heavy dependence on 5-inch guns. Accordingly, the Marine Corps strongly supports several improvements which are directed at enhancing NSFS, such as the reactivation of all four IOWA class battleships and the continuation of the Semiactive Laser Guided Projectile program through full production.

COMMAND AND CONTROL

New systems that will assist the Marine on the battlefield are in various stages of development and fielding. They will provide the Fleet Marine Force commanders with automated command and control support to cope with the increased tempo and complexity of the modern battlefield. Our philosophy is to use computers to relieve the Marine of repetitive, routine tasks; to perform certain tasks and calculations more quickly and accurately; and to organize, file, and present information to support decision-making.

One of these systems is the Position Location Reporting System (PLRS). PLRS is an automated, tactical, command and control system that provides the user with accurate, real-time position location and identification information. The Marine Integrated Fire and Air Support System (MIFASS) is another one of our important tactical command and control systems. Through MIFASS, the Marine commander is provided automated support in the integration of supporting arms with the ground scheme of maneuver.

These command and control systems will serve to enhance the coordination of our Navy-Marine Corps team. Our first major step in this direction is the permanent installation of these Marine Corps systems on the LHD-1 class amphibious assault ships. Not only will these tactical command and control systems support the landing force commander, but they will also be capable of providing up-to-date tactical information to the task force commander. Consideration is being given to including the permanent installation of Marine Corps tactical command and control systems in the LCC-19 class Ship Improvement Program.

The Deployable Force Automated Services Center (DFASC) is designed as the solution to the operational deficiency inherent in large-scale automated data processing support for MAB or MAF units when deployed. The new DFASC will be transportable by current Military Airlift Command aircraft, as well as Marine Corps trucking and Navy shipping, and will be provided to each of the existing MAF's and the 4th Division/Wing Team.

This year's budget contains a proposal for a tactical Air Operation Center, TYQ-23, an important centerpiece for our air command and control modernization program. The unique, modular construction of the TYQ-23 allows it to be tailored to the size of the Aviation Combat Element of the MAGTF. Utilizing increased automation, the TYQ-23 decreases response time and requires fewer personnel. All of the reliability initiatives demonstrated in TYQ-23 support will increase MAGTF responsiveness and mobility.

INTELLIGENCE

The thrust of the Marine Corps' intelligence efforts logically focuses on the timely support of power projection. Our operational requirements have been validated by the fleet commanders and the OPNAV Staff. CINCPACFLT's Maritime Air/Ground Intelligence Cell serves as a useful prototype for this support because it responds to the needs of deployed MAGTF commanders by providing appropriate level, all-source intelligence.

Our ability to produce and disseminate all-source intelligence to tactical commanders is developing rapidly under the Marine Air-Ground Intelligence System (MAGIS). The Intelligence Analysis Center, the "heart" of MAGIS, became operational this year. Other systems being developed include the All-Source Imagery Processor, a soft-copy imagery exploitation system which exploits electro-optical, infrared, and radar imagery in near real-time from tactical and national sources. Our Signals Intelligence and Electronic Warfare systems will be modular, transportable, and semi-automated. They will intercept, identify, locate, and jam threat signals from both airborne and ground based platforms as well as analyze and report intelligence information from tactical and national sources.

We remain dedicated to improving the ability of tactical commanders to exploit national intelligence capabilities through the Tactical Exploitation of National Capabilities (TENCAP) program. TENCAP assists in developing the systems, procedures, and force structure required to accomplish this vital function. It also educates and exercises our operational commanders in accessing those national systems which complement the tactical reconnaissance and surveillance assets organic to MAGTF's operating around the world.

Marine Corps membership on such national-level committees as the National Foreign Intelligence Board, the National Foreign Intelligence Council, the Intelligence Management Coordination Group, the Defense Reconnaissance Support Program Review Panel, and the Critical Intelligence Problems Committee, has greatly enhanced our participation in national-level intelligence forums.

COMBAT SERVICE SUPPORT

We are continuing to restore and enhance the ability of our Force Service Support Groups (FSSGs) to support and maintain amphibious operations at all levels of

MAGTF configuration. Increasing the manning level of the FSSG's represents the culmination of our Combat Service Support Restoration Plan which will have elevated the FSSG manning of wartime requirements from a level of concern in FY80 to a healthy level by FY88. I might add that these enhancements are being applied to our Reserve component combat service support force as well as to the Active component.

The Marine Corps implementation of the DOD Acquisition Improvement Program focuses on readiness and improved support to the Fleet Marine Force. We have increased emphasis on Integrated Logistics Support system designs which are reliable, maintainable, and supportable. This approach enhances combat service support by producing better weapons and equipment. Our strategy in the acquisition cycle includes the use of proven systems, adequate "front end" test resources, and integrated support requirements.

The Marine Corps standard supply system, or M3S, is being designed to provide a single supply system within the Marine Corps, encompassing both the wholesale and retail functions for the Fleet Marine Force and the Supporting Establishment. It will replace four existing systems and will essentially combine their distinctly separate functions into one system.

The Marine Corps Field Logistics system (FLS) improves our strategic mobility and sustainability by concentrating on the development of needed material in configurations that are compatible with the requirements of container ships. Not only will we be more assured that available merchant shipping is used effectively, but also, by implementing the FLS modularization concept, a greater flow of material across an unimproved beach can be realized.

To assist in the off-load of containers from merchant fleet ships, we are in the process of procuring and fielding the Lightweight Amphibious Container Handler (LACH). The LACH, which has been operational since FY84, is a towed, straddle-lift carrier designed to remove containers and tactical shelters from beached landing craft and place them on trucks for further transport to inland combat service support areas. The LACH can also be dismantled and transported to inland areas for routine container handling.

The Logistics Vehicle System (LVS) consists of a powered front-body unit and four rear-body, trailer-type variants. This vehicle system will be capable of carrying standardized containers and heavy cargo, and will provide a necessary and significant improvement in tactical mobility while achieving a more supportable logistical vehicle fleet. The LVS is expected to be operational during FY85 with a total of 1400 in service by the end of FY88.

An area of immediate concern is that we do not presently have hospital ships to provide the medical support needed where our forces are employed, ready when the first casualty occurs. To correct this deficiency, the Navy has embarked on a program to provide dedicated afloat medical support for our forces through the Hospital Ship Program which will provide two San Clemente Class tankers converted into hospital ships with 1,000 beds each. Initial operating capability is scheduled for May 1987 and February 1988.

The Rapidly Deployable Medical Facility (RDMF), which is currently afloat in the Indian Ocean, is the first facility to be acquired by the Navy in recent years which is dedicated to treating, holding, and returning patients to duty within the theater. The RDMF and the 11,250-bed Fleet Hospital Program will provide the bed space and treatment capability to reduce the logistics requirement for medical evacuation out of the theater and, consequently, reduce the demand for experienced, combat Marine replacements.

The Marine Corps has improved its medical capabilities through the acquisition of medical equipment and consumables to support each of the three MAF's. This support is designed to have the capability to be phased ashore, built up, and consolidated consistent with the tactical situation.

An increase in the number of medical personnel assigned to operational units provides enhanced medical care. These additional physicians, medical planners, and hospital corpsmen ensure that the required medical support is planned for and available at the time needed.

Consistent with our efforts to establish a warfighting capability through MPS brigades, we will pre-position the medical equipment and supplies necessary to support each of the MPS brigades.

As a force-in-readiness, the Marine Corps must be capable of rapidly deploying to respond to crises or contingency situations. Presently, we plan our embarkation process manually; however, we are currently developing an automated information system, called the Computer Aided Embarkation Management System (CAEMS), which will function on a microcomputer and use state-of-the-art graphics features.

This system will enhance the Marine Corps' capability to combat-load ships and aircraft with each MAGTF's complement of supplies and equipment by providing automated embarkation load plans. We envision this system as an improvement to our current Standard Embarkation Management System. Upon implementation, CAEMS will work in conjunction with the U.S. Air Force Computer Aided Load Manifesting (CALM) which is a prototype, automated, aircraft load planning system.

MANPOWER

At this point, I wish to draw your attention away from our hardware-related programs and discuss our singularly most important program—Marines and their families.

I continue to be awed by the character, quality, and commitment of the men and women performing the difficult missions assigned to Marines. While all of the matters discussed thus far have a high priority, nothing has a higher priority than continuing to enlist and retain quality young people who are among the finest in America.

Total force accessions in FY84, in addition to surpassing our goals, included 95 percent high school graduates—3 percent above last year—and better than 96 percent who achieved scores in Categories I-III in the Armed Forces Qualification Test (AFQT).

I am particularly pleased that the distribution of bright, self-disciplined young Marines to our combat units is approaching that of our technical and logistical units.

Our recruiting successes of the past five fiscal years are the result of four factors:

First, a spirit of patriotism that exists among young Americans desiring to serve their country.

Second, the dedicated noncommissioned officers assigned as recruiters in the neighborhoods and small towns across the nation.

Third, favorable economic and demographic conditions.

And, most importantly, congressional support in providing the required resources.

We are closely monitoring our near- and long-term recruiting capabilities. Economic forecasts and demographic projections seem to indicate that there could be a change in future enlisted recruiting quality. We expect to continue to achieve the numerical goals, but our analyses indicate the potential for a sharp downturn in the percentage of AFQT Category I-IIIA enlistments beginning in FY86 and continuing through FY90. This downturn could ultimately affect our capabilities and systems throughout the Marine Corps.

Officer accession programs also continue to provide intelligent and enthusiastic young people prepared to shoulder the future leadership responsibilities of our Corps.

We completed a banner year in total reenlistments during FY84. Through our retention of well qualified enlisted Marines, the leadership and experience in the force rose substantially. These reenlistments resulted in considerable monetary savings by reducing the need for replacements requiring training. The combination of good retention and a vigorous lateral movement program among occupational fields contributed to a reduction in skill imbalances. It must be stressed, however, that the Selective Reenlistment Bonus Program remains the most significant factor in retaining trained and experienced Marines in hard to fill skills. Thus far, the success realized in FY84 continues in FY85.

By the end of FY86, our manpower plan calls for an end strength of 199,500—a modest increase of 1,200 over the FY85 level. The net requirement for additional Marines is primarily associated with ongoing weapons and equipment modernization and enhancement programs. Concurrently, the net result supports our overall goal of maintaining a high level of personnel readiness.

I wish to highlight a particular manpower problem which we need your help to correct—the shortage of field grade officers. The Defense Officer Personnel Management Act (DOPMA) field grade ceilings, coupled with high and stable retention rates, are preventing the Marine Corps from meeting the promotion timing window for the grade of major as intended by Congress and our programmed requirement for 500 additional officers in this grade. I wish to emphasize that this grade relief request will not increase the active duty strength of our officer corps.

The Comprehensive Flag and General Officer Legislation is also of great significance. In addition to permitting us to properly staff important internal and joint billets, we believe this legislation will provide the control over flag and general officer numbers desired by Congress and will offer the Services a stable set of expectations for structuring key leadership requirements.

As I travel throughout the Corps listening and talking to our Marines, I continue to be impressed by the strong, consistent support furnished by the silent partners—the Marine family. Our families rely on institutional support—a fair, reliable, compensation system, medical care, commissaries, and exchanges—in order to bear the hardships of essentially maintaining two family units.

Today's military compensation system is a complex, multidimensional support system—one made up of pay, benefits, reimbursements, incentives, and retirement. Military pay is the basic foundation that touches every Marine. The trend over the last few years has been to base pay increases on retention and recruiting successes, not on economic reality. I remain committed to achieving pay comparability for all Marines—comparability which maintains military pay at a level that is equitable and competitive with the private sector.

Benefits and reimbursements support the foundation of the compensation system. Normally non-headline areas, benefits and reimbursements became the center of attention this past year. We must collectively stabilize the benefits of the military compensation system enjoyed by all service members that specifically provide for the reimbursement of costs inherent in permanent change of station moves.

The current retirement system continues not only as a powerful career incentive, but also as a force management tool, because the pool of retirees eligible for recall to active duty supports mission readiness in the total force. It is one of the key ingredients of the entire compensation system and should not be changed.

While compensation issues are important, the well-being of Marines and the soundness of the family environment directly affect retention of quality personnel. Many initiatives, beyond compensation, are planned to improve the well-being of our families. Programs designed to enhance family relationships lead to more effective and happier families. This benefits both the Marine Corps in particular and society in general.

In the event of mobilization, many families will need assistance during the transition from reserve and retired status to active duty. To assist with this transition, Marine Corps Casualty/Family Assistance Teams—established in over 75 locations throughout the country—are tasked with providing information to families and reporting and processing casualty notifications as they occur.

Another personnel-related matter is BAQ/VHA allowances, where we appreciate your efforts to improve BAQ/VHA entitlements. Marines in certain areas, however, are still concerned with finding adequate housing for their families because, as the cost of housing increases, these Marines find themselves unable to obtain satisfactory housing within their BAQ/VHA allowances.

An additional concern of Marines for their families is military medical and dental care, an integral part of the Marine's total benefit package. I fully support DOD's initiative to provide a Dependent Dental Program.

Morale, welfare, and recreation must be viewed as important, although intangible, elements in retention and readiness. Non-appropriated funds support the majority of our recreation programs, and we continue to emphasize the judicious use of these funds.

The concerns just addressed take on additional importance as we continue steady progress in our effort to increase the number of accompanied tours on Okinawa. Currently, there are over 1,300 command-sponsored Marine families there. This number, which is tied to the availability of family housing, will increase by 225 in FY85 and FY86. Combined with the expanding Unit Deployment Program (UDP), and accompanied tour program continues to reduce unaccompanied tours overseas, reducing costly Permanent Change of Station moves and increasing personnel stability in Okinawa-based units. Our goal continues to be accompanied tours for all career Marines and dependent-restricted tours for all first-term Marines. Stability afforded by the UDP and longer accompanied tours directly enhances readiness. We are convinced that the impact on family morale and retention of quality career Marines will be of benefit for years to come.

One personnel area in which we have experienced considerable progress is our substance abuse program. Early in 1982, we implemented new programs to eliminate the use of illegal drugs and the abuse of alcohol in our Corps, and, according to a recent survey, these programs are working. Drug abuse has dropped by one-half from the 1980 level. Per capita consumption of alcohol is down by one-third, and the number of heavy drinkers is down by one-half since 1980. We continue to actively pursue our goal of nontolerance of drug use and alcohol abuse. We continue to deglamorize the use of alcohol and encourage those who elect to drink to do so wisely. Leadership, education, urinalysis, discipline, treatment, and rehabilitation are the basics of our success.

Another important personnel area is the increased importance of women in the Marine Corps. During the last decade, while end strength remained relatively stable, the number of women on active duty nearly tripled to 643 officers and 8,550 enlisted. We recently completed a comprehensive review of the classification, assignment, and deployment policies for enlisted women. The primary goal in this review was to ensure combat readiness of Marine air-ground task forces. The review established that enlisted women should continue to serve in 35 of 39 occupational fields and that the enlisted woman population should increase from the present 8,550 to about 10,500. Women will continue to serve throughout the Fleet Marine Force and supporting establishment in time of peace and during war.

Marine Corps policy provides for full utilization of our vital civilian personnel. Employment of civilian personnel permits more effective manning of the Fleet Marine Force; enhances training, readiness, and sustainability; provides continuity in operations; and provides specialized experience that is not otherwise available within the military structure. Our civilian personnel are employed in a wide variety of professional, technical, and administrative functions.

In concluding my remarks on manpower, I wish to say that leadership requires special emphasis. I will continue to insist that Marine Corps policies and programs continue to produce and reinforce sound leadership. Whether in a peaceful barracks setting or in a tense, crisis situation, your Marines deserve leaders who are competent, dedicated, and professional; to these principles we are committed. Americans historically have always responded to strong, fair leadership. The Marine Corps develops leaders willing to accept responsibility for the mission and for people. Our policies are designed to create stability at the battalion and squadron level, and they stress teamwork and unit esprit in order to maintain high morale and superior readiness. Our emphasis on quality Marines produces individuals prepared to respond to the leadership challenge.

MARINE CORPS RESERVE

The Marine Corps Reserve is charged with providing the capability for rapid expansion of the force during a national emergency. Today, the Reserve is an integral partner, providing substantial peacetime contributions, as well as wartime capabilities. These forces present a vital, added dimension to the Marine Corps' ability to respond to crises.

The Marine Corps has a mobilization capability that is second to none among the Services. Trained units and pretrained individuals can be quickly assimilated from the Reserve into a total war effort. Provisions have been made to augment or reinforce Active commands with a great range of capabilities, from individual combat or support units to an entire reserve MAGTF. In a maximum effort the Reserve will provide almost one-third of the manpower and a broad range of combat assets, to include 100 percent of the civil affairs capability, 67 percent of force reconnaissance assets, 40 percent of the tanks, 33 percent of the heavy artillery, 33 percent of the anti-aircraft missile capability, and 30 percent of light-attack aviation.

From a purely manpower perspective, mobilization of pretrained Marines from the Individual Ready Reserve (IRR) has become increasingly refined. The procedure for identifying grade and skill requirements is fully automated, as is the flow process which directs the individual to a vacancy in his gaining command. A preassignment program identifies certain reservists whose presence is time-sensitive and issues "hip-pocket" orders directing them to a particular post within the first few hours of mobilization. This accurate, timely expansion of the force with qualified individuals and organizations is an essential dimension to Marine contingency planning and may be a critical dimension to success on the battlefield.

The wealth and depth of experience and expertise in the Reserve are impressive. Combat experience alone, still high among prior-service, career reservists, is an asset to be skillfully retained and utilized. The Marine Corps has also developed a program to take advantage of skills developed in the business world. Mobilization Training Units, currently composed of 900 officers and 100 staff noncommissioned officers in the IRR, are focusing their expertise on special projects for 18 operational sponsors in 35 states. The technical credentials and completed projects of these Marines are being catalogued for future reference.

Over the years there has been a changing character in the Active/Reserve relationship. Once viewed primarily as a source of pretrained individuals, Selected Marine Corps Reservists train today as highly effective combat organizations. Units are tied to Active commands in contingency planning. This concept of Reserve reinforcement is now being expanded to include provisions for a Reserve MAGTF.

Total Force equipment modernization and structure growth for the Reserve are carefully planned and orchestrated. In concert with Active forces, Reserve units will receive the major, new, ground equipment and weapons systems being introduced into the Marine Corps inventory. Along with equipment modernization, numerous structural changes are occurring, to include activation of the remainder of the 4th Medical and 4th Dental Battalions, an LAV battalion, a target acquisition battery, and the reorganization of infantry and direct-support artillery battalions. In fiscal year 85, the Marine Corps will activate its first Selected Marine Corps Reserve unit in Anchorage, Alaska. This unit will provide opportunities to take advantage of extensive Alaskan training areas and to conduct operations in a genuine arctic environment. Growth and modernization of Reserve aviation are also proceeding according to plan. A third fighter squadron was activated in 1984, and plans are being made for an additional KC-130 squadron in 1986. "Front-line" aircraft released from the Active force as they transition to new systems are being placed in the 4th Marine Aircraft Wing. This should not imply that the Corps is satisfied with this level of Reserve upgrade. These aircraft are aging, and there are acknowledged shortages, especially in attack helicopters and aerial refuelers. Marine acquisition plans are addressing these shortages and are effecting system modernization by transitioning Reserve squadrons immediately following the Active force upgrade to such aircraft as the F/A-18 and MV22A. The Marine Corps now intends to upgrade all Reserve fighter and some attack squadrons to the F/A-18.

Manpower and equipment are only a portion of the readiness equation. It is training that cements the relationship and transforms the individual Marine and his unit into combat power. Mobilization training, essential in the Reserve, is routinely tested with a system of "no-notice" mobilization tests which ensures these capabilities are maintained. During POWDER RIVER 84, which was essentially a command post communications exercise at the JCS level, the Marine Corps actually moved units and individuals to their gaining commands through designated stations of initial assignment. Some of these units and individuals also participated in actual exercises overseas.

Combat training in the Reserve has taken a new direction, and home centers are no longer the focal point. In 1984, 25,000 Marine reservists trained in exercises around the world from Puerto Rico to Korea. The Active/Reserve training relationship is beginning to mature, and the direction is sound. The Corps will continue to pursue increased Reserve integration into major Active force exercises.

Evidence of the success of the Corps' Total Force training policies can be readily seen by the fact that a Reserve squadron, VMFA-112 in Dallas, competing with all Active and Reserve fighter squadrons, was designated the Marine Corps' Fighter Squadron of the Year for 1984. Additionally, in August, the first brigade-sized Reserve landing since the Korean War was conducted.

The Marine Corps has substantial capability in its Reserve. Marrying their civilian pursuits with the needs of the Service, these "Citizen Marines" are a great source of pride in peacetime and, if called upon, will be an indispensable source of strength for the national defense as part of the Marine Corps Total Force.

OPERATIONAL PERFORMANCE

In my report last year I stated that the Marine Corps' top operational priority was readiness. I would like to reiterate that the operational readiness of our Fleet Marine Force units to respond rapidly throughout the entire spectrum of conflict continues to be the Marine Corps' top priority. Our emphasis on readiness is apparent in the array of Marine air-ground task forces which are fully combat ready and prepared for immediate contingency deployments.

The combat readiness and ultimate capability of our units are dynamic and perishable commodities dependent on manning by qualified personnel, sufficient combat and combat support equipment; realistic training; and, perhaps most important, the Marine Corps' uncompromising standards of leadership. In each of these areas we have continued to improve. A balanced, intensive, challenging training program integrates personnel and equipment in realistic training exercises conducted throughout the world. The effectiveness of this training is measured by the Marine Corps Combat Readiness Evaluation System. This demanding regimen periodically measures the performance of Fleet Marine Force units against standards established for all aspects of contemporary warfare. The final ingredient of the readiness equation, leadership, continues to be unmatched. Increased tour length for battalion commanders has improved commandership. Emphasis on professional education for young leaders has enhanced the performance and stability of our forces.

TRAINING

The Marine Corps' training goal is to provide Marines realistic, challenging training that prepares them to accomplish all assigned missions and tasks. In an effort to be more efficient and effective in achieving this goal, the Marine Corps is accelerating the development of collective and individual training standards for use within the operating forces and supporting establishment. The ability of unit commanders to achieve combat readiness by demonstrating high standards has long been the hallmark of Marine Corps training. From large scale amphibious exercises down to the training of individual fighting skills required for small unit tactics, the word is clear for both Regular and Reserve Marines: "Train as you would fight."

Since fiscal year 80, the number of major exercises in which the Marine Corps has participated has more than doubled. Concurrently, increases in the size of our exercises have resulted in more Marines receiving mission-oriented training on a more frequent basis. These training deployments away from home bases have also provided additional opportunities for training in varied terrain and climatic conditions that approximate those in potential contingency areas of the world. Typical Marine Corps training exercises are designed to accommodate small units as well as the largest Marine air-ground task forces.

Eight Active and two Reserve battalion-sized, air-ground training exercises, which include live-fire events, are conducted annually at the Marine Corps Air-Ground Combat Center, Twentynine Palms, California. In addition, one Reserve and nine Active battalions conduct mountain and cold weather exercises annually at the Marine Corps Mountain Warfare Training Center, Bridgeport, California. Combined arms exercises, along with all mission-oriented training, are constantly refined and provide valuable lessons learned which are regularly incorporated into the latest developments in doctrine, tactics, and equipment. The desert and mountainous environments at Twentynine Palms and Bridgeport, respectively, provide the climate and terrain which parallel geographic areas of concern to the Marine Corps. The maneuver areas at Twentynine Palms permit integration of live ordnance for all of the weapons systems employed in the Marine Corps. Similarly, about 140 Marine aircrews train each year at a specialized tactics and weapons squadron at Yuma, Arizona, and provide not only a cadre of tactical experts at their units but also help to refine aviation tactics, doctrine and equipment

Small unit training is the keystone of successful large unit operations. Annual Marine Corps-wide competition among rifle squads, advanced tactical training for aircrews, and frequent performance testing of battalions and squadrons provide the appropriate link between specialized training for individuals and the desired operational readiness of air-ground forces.

Our individual Marines are proud, disciplined, proficient, and loyal. "Semper Fidelis" is more than a motto; it is a way of life. Such motivation is molded and directed by the finest teachers in the world, beginning with our drill instructors at the recruit depots and continuing with our staff noncommissioned officers and officers in the Fleet Marine Force. Professional military education and skill progression training are provided at appropriate junctions of grade and billet assignments to develop the many facets of a military professional.

As the art of modern warfare becomes more sophisticated and prone to rapid change, the Marine Corps must take full advantage of new technology to modernize training programs and methods. In this regard, we shall use the products of technology with judgment and precision. Flight simulators have long been recognized and used to supplement actual flight training. Maintenance simulators are being developed and utilized with increased student learning at significant cost savings. Since there is no substitute for live-fire exercises, sufficient quantities of ammunition must continue to be provided for that purpose. Simulation devices are being developed which will enhance the skills of riflemen; tank, TOW, DRAGON, and Stinger gunners; and artillery and mortar forward observers. Additionally, other devices are being developed which will enhance the skills of commanders and their staffs in tactical decision-making, command and control, and fire support coordination.

Application of automated data processing technology to training management procedures is expected to achieve a significant decrease in the amount of time required to accurately develop training standards for new weapon systems and tactics; to improve the capability of commanders to plan, budget, and allocate training resources; and to evaluate all training programs in a timely fashion. We have established internal procedures to ensure that the development of such training programs and methods coincides with the procurement of each new weapon system. Joint service review of technology for training purposes is required to eliminate duplication of effort and is enthusiastically supported by the Marine Corps.

We are not, however, going to forsake a well trained Marine Corps to achieve a low-cost training program. While we are making use of the best that technological advances can provide in the area of training support, the Marine Corps remains dedicated to maintaining a fully capable and highly trained combat force ready to perform in any contingency. It is to that end that all of our training effort is directed.

FORWARD DEPLOYMENTS

Our forward posture world-wide, in support of national policy, allows us to respond to any international crisis when directed by the National Command Authority.

II MAF is the major operational command on the east coast and continuously has a MAU forward-deployed in the Mediterranean Sea. II MAF also deploys elements to the Atlantic Ocean and Caribbean Sea. The 28th MAU, for example, makes periodic deployments to the Caribbean to demonstrate United States presence while the 26th MAU makes an annual deployment to Norway.

III MAF is forward-based in Japan and Hawaii and deploys the 31st MAU in the Western Pacific and Indian Ocean. Beginning in February 1985, I MAF, based at Camp Pendleton, will deploy a MAU to the Western Pacific, supporting III MAF with its MAU commitment.

Our three MAF's can also provide air alert battalions which give us the capability to rapidly reinforce our forward-deployed units should the need arise. Additionally, in an effort to improve the overall combat capabilities of the Navy-Marine Corps team, the superb aviation interoperability initiative which began last year will accelerate. FY86 will witness the first two of four Marine A-6E squadrons assigned to deployed carrier air wings. Two Marine F/A-18 squadrons will already be aboard. U.S. Navy A-7 squadrons will concurrently deploy to WestPac in support of Marine ground forces on a continuing basis. This highly successful mutual support initiative, which began last year, has been an overwhelming success. It promises to vastly improve the flexibility and effectiveness of your Naval forces.

While deployed, these MAGTF's conduct operations and training exercises designed to improve the Marine Corps' ability to operate with the other Services and our allies. We train hard so that when called on, we will be prepared. We will continue to be ready, whether we are providing humanitarian assistance or executing a contingency mission.

FISCAL RESPONSIBILITY

The financial resources we are requesting for FY86 will support the requirements and programs discussed throughout this statement. This budget increases our readiness by fully implementing the MPS strategic mobility enhancement program, by continuing the modernization of our battlefield equipment for the Active and Reserve forces, and by narrowing the gap toward our targeted sustainability objectives.

A summary of financial resources by appropriation and authorization request which makes up the Marine Corps FY86 budget to support the programs and requirements discussed during this statement is displayed in Appendix II.

CONCLUSION

In conclusion, I would like to reaffirm the commitment of your Marine Corps to jealously guard the trust and confidence of the Congress and the American people. You can be assured that with the improved weapons, mobility, sustainability, and command and control assets provided, soundly led, properly trained, quality Marines will be ready to respond when called. The Marines, as America's Force-in-Readiness, provide the flexibility to enter the spectrum of conflict at any point and produce the required results.

As Marines, we have the unique capability, unmatched anywhere in the world today, to make a forcible entry from the sea with a fully integrated, mission-tailored, combined-arms, self-sustaining air-ground team. We enable our country to keep the qualitative edge needed to provide a decisive, flexible, credible response by amphibious forces in global crises.

Together, we prepare for the call that may or may not come—the call to "Land the landing force." As Marines, we do not determine when or if that call will come. I can assure you, however, that, with your support, we are ready and will remain ready to respond to that call. At the same time, we continue to share the hope that the call will not be sounded.

In light of Soviet policies and unprecedented military growth, the need for the United States to be able to establish maritime superiority has never been greater. Because of your support, we continue to improve our amphibious capability, and needed modernization programs are now well underway. With continued support, we will provide the maximum defense for each dollar invested in the Marine Corps.

For 209 years, Marines have served this nation well and faithfully. I assure you, that tradition will continue.

Thank you.

APPENDIX I

ENHANCEMENT PROGRAMS

TABLE I - I

GROUND MOBILITY ENHANCEMENTS

Light Armored Vehicle (LAV)	° Lightweight, flexible, agile fighting vehicle ° Firepower-intensive organization 147 LAV's/LAV battalion (CY83) ° Helicopter transportable ° Enhanced strategic transportability
Landing Vehicle Tracked LVT7A1	° Service life extension program began 1982 ° Extends use until 1990's ° New engine, non-integral fuel tank, all electric weapons stations ° 327 new LVT's for MPS
Armored Vehicle Launched (AVLB) Bridge	° Eliminates critical shortfall in assault Gap Crossing Capability ° Organic to Tank Battalion ° Capable of pacing with Armor and AAV Units

TABLE I - II

INFANTRY ENHANCEMENTS

Smaller/Firepower Intensive	° Personnel reduced at battalion level ° Firepower up 25%
Improved Small Arms	° .50 Cal MG--8 per battalion; procured FY82-83 (IOC FY83) ° Shoulder-Launched Multipurpose Assault Weapon (SMAW)--18 per battalion; procurement FY84-89 ° Squad Automatic Weapon (SAW)--68 per battalion; procurement FY82-87 (IOC FY84) ° M-16 Product Improvement Program (PIP); procurement FY82-89 (IOC FY84) ° 9mm Pistol --- Beretta M 92SBF, 9mm Pistol --- replaces the current .38 and .45 caliber pistols --- increased range, lethality, safety, interoperability within NATO --- procurement FY85-89 (IOC FY86) ° M60E3 7.62mm MG PIP; Procurement FY84-85 (IOC FY85) ° MK-19 40mm Grenade Launcher--12 per infantry battalion; procurement FY82-87 (IOC FY85)
Mortar Enhancements	° I81mm--proposed procurement FY85-88 (IOC w/LAV FY86, IOC w/other FMF units FY89) ° Lightweight company mortar deliveries completed FY83

TABLE I-III

ANTI-ARMOR ENHANCEMENTS

Tube-Launched Optically-Tracked, Wire-Guided Missile (TOW)	° 144 TOW per division; procurement FY80-86 (IOC FY84) ° Phase I TOW procurement complete FY81; 5" warhead and extended range to 3750m (IOC FY87) Phase II procurement began FY81; 6" TOW warhead, extended range and electrical optical countermeasures (EOCM) (IOC FY84) ° Night sights--144 per division; procurement FY79-87 (IOC FY84)
DRAGON	° 8 additional per battalion; total 32 (IOC FY84) ° Night sights--144 per division; procurement FY79-82 (IOC FY84)
Tanks	° M60A1--end of service life late 1980's ° FY88 funds planned for replacement of M60A1 with M1A1 ° Enhanced lethality, mobility, and survivability
Air Delivered	° Modern armor threat necessitates air delivered anti-armor weapons which offer increased aircraft survivability and target lethality ° Near-term, state-of-the-art, anti-armor weapons being pursued for both fixed wing and helicopters ° Laser Maverick--fixed wing PGM (IOC FY85) ° Hellfire--helicopter PGM (IOC FY86) ° GATOR--area/area denial weapon (IOC FY96) ° 25mm multipurpose gun for the AV-8B (IOC FY85)
Light Anti-Armor Weapons	° Continue to participate with Army in LAW evaluation program ° Interested in most cost effective system that meets USMC requirement ° Monitor Army's M72 PIP ° Develop anti-armor round for the SMAW (IOC FY88)

TABLE I-IV

ARTILLERY ENHANCEMENTS

Conversion to M198	° New improved structure transition began in FY83; procurement FY79-82 and FY86-87 ° 105mm howitzer reduction of 162; 155mm howitzer increase of 192
Additional 155mm (SP)	° Increase of 30 tubes--3 batteries by FY86; total 5 batteries by FY89
Addition of Target Acquisition Battery	° One each in FY85, 87, and 88
Precision Guided Projectiles	° Modular Universal Laser Equipment (MULE) procurement FY82-85 (IOC FY86) ° Copperhead--procurement programmed (IOC FY86)
Family of Scatterable Mines (FASCAM)	° Area Denial Artillery Munition (ADAM)(IOC FY82), anti-personnel mines, and Remote Anti-Armor Mine (RAAM) anti-tank mines--procurement FY81 (IOC FY83)
Battery Computer System	° Procurement FY86 (IOC FY87)

TABLE I - V

AVIATION ENHANCEMENTS

TACAIR	° AV-8B--responsive, effective CAS
	° A-6F--effective all-weather, deep-strike medium bomber
	° F/A-18--superior fighter/bomber, force multiplier
	° AH-1T+--improved attack helo, T700, Hellfire capable
	° CH-53E--free world's most capable heavy lift helo
Weapons	° Laser Maverick--PGM for CAS
	° Hellfire--Anti-armor helo delivered PGM
	° I^2R Maverick--deep air support weapon
RDT&E	° MV-22A (Osprey)--self deployable, medium lift assault transport with strategic and tactical implications
	° Helo development--T700 enhanced engine for AH-1T; Hellfire MOD for AH-1J/AH-1T Cobras; helo night vision enhancements.
Airspace Command & Control and Missiles	° AN/TYQ-23--command and control of airspace, aircraft, and missiles.
	° IHAWK--Medium range anti-air missile.
	° Stinger--shoulder-launched surface to air missile
Reserve Modernization	° A-4M--light attack aircraft to Reserves as AV-8B enters active component.
	° F-4N/S--superb fighter/attack aircraft.

TABLE I-VI

COMBAT SERVICE SUPPORT ENHANCEMENTS

Logistic Vehicle System (LVS)	° Four rear body units; container hauler wrecker, dropside cargo with crane, 5th wheel ° Off road mobility ° 60" fording capability ° Replaces aging vehicles such as 10-ton and other assets together with various trailers and dolly converters ° Fielding commences 3rd Qtr FY85
High Mobility Multi-purpose	° Enhanced TOW carrier ° Weapons Platform for MK-19 40mm ° Replaces 8MT vehicles/trailers in Marine division ° Replaces all communication vehicles ° 26,000 current Marine Corps vehicles/trailers replaced by about 14,000 HMMWV's (IOC FY85)
Commercial Utility Cargo	° Replaces the M880 ° Three body variants (a) Utility (b) Cargo (c) Shelter carrier
5-Ton Truck M939	° Replaces current overaged 2 1/2- and 5-ton tactical fleets ° Five configurations ° Prime mover for M198 Howitzer
Field Logistic System (FLS)	° Exploits the benefits of containerization ° Designed around international dimensional standards ° Reduces manpower, system costs, and shipping space requirements ° Five major subsystems ° Enhances logistics support system and readiness posture
Medium Girder Bridge	° Lightweight, hand-erectable, easily transportable, and rapidly employable girder type bridge of welded aluminum alloy ° 100-ft. spans or 162-ft. spans with link reinforcement set ° 8 bridges per company (hand erectable by 4-or 6-man teams)

TABLE I-VII

COMBAT ENGINEER ENHANCEMENTS

Improved Counter Mine	° M58 Trailer Mounted Line Charge System--assault minefield breach capability for Tank and Engineer Bn's (IOC FY85) ° M59 Mine Clearance System Kit--assault mine breach from surface zone and inland for AAV Bn's (IOC FY85) ° M60 Track Width Mine Plow--assault minefield breach capability for M60 Tank (IOC FY86) ° Catapult Launched Fuel Air Explosive (CATFAE) will provide an amphibious on-the-move countermine capability to neutralize pressure/tilt-rod mines in surf zone and ashore (IOC FY91) ° Vehicle Magnetic Signature Duplicator (VEMASID)--projects magnetic field causing magnetic mine fuse logic to activate and harmlessly detonate mines ahead of vehicles (IOC FY90)

APPENDIX II

FISCAL

TABLE II-I

APPROPRIATION/AUTHORIZATION REQUEST

($ IN MILLIONS)

APPROPRIATION TITLE	FY 1985	FY 1986	FY 1987
Military Personnel, Marine Corps	4,967.1	5,217.4	5,297.6
Reserve Personnel, Marine Corps	271.8	290.0	306.0
Operation & Maintenance, Marine Corps	1,650.9	1,667.4	2,035.8
Operation & Maintenance, Marine Corps Reserves	58.8	61.6	66.9
Procurement, Marine Corps	1,836.7	1,726.8	2,182.6
Marine Corps Stock Fund	34.9	42.7	63.0

TABLE II-II

END STRENGTH AUTHORIZATION REQUEST

(# in 000's)

CATEGORY	FY 1985	FY 1986	FY 1987
Active Duty End Strength	198.3	199.5	201.7
Selected Reserve Average Strength	40.2	41.9	43.6
Civilian Personnnel End Strength (USMC Portion of DON Request)	21.7	22.1	22.5
Average Military Student Training Load, Active	20.3	20.8	21.6
Average Military Student Training Load, Reserve	3.4	3.8	3.6

Chairman GOLDWATER. Senator Nunn, we have a situation here that I explained earlier. Senator Cohen has to go downtown to a meeting, but if you have some remarks you would like to make——

Senator NUNN. I will yield to Senator Cohen and come back. Go ahead.

Chairman GOLDWATER. Thank you very much. Senator Cohen, don't argue; you will be here all morning.

Senator COHEN. I will take it.

Secretary Lehman, I would like to commend you for your statement and I would draw the attention of my colleagues to the fact that even though the overall Defense Department budget request is about $29 billion higher in the fiscal year 1986 than it was in fiscal year 1985, the Navy shipbuilding program actually declined. It is $172 million lower.

You actually have 28 ships in the request for fiscal year 1986, over the 25 ships last year, and yet you come in $172 million lower. So I think it does say something about the kind of savings you have been able to achieve through more and more competition, and you are to be commended for that.

I would like to ask some questions concerning a couple of key issues. No. 1, New Zealand happens to be in the news this week. I personally believe that that was a very tragic mistake on the part of New Zealand, in my judgment, undercutting the ANZUS treaty, and also undercutting our ability to keep those sealanes open. They thereby are undermining this country's ability to help keep the world free and prosperous on behalf of all free nations.

But this issue is related also to those that I have heard and raised on the Tomahawk cruise missile, that by proliferating the deployment of the cruise missile we are thereby simply adding more nuclear land attack missiles to hundreds of ships and that it is destabilizing. The argument is that by lowering the distinction between the nuclear and the conventional naval power capability one may hamper the "showing of the flag" in peacetime operations.

What is your response to that kind of criticism?

TOMAHAWK CRUISE MISSILE

Secretary LEHMAN. Well, first, I agree completely with your sentiments as expressed in your speech on the floor last week on the New Zealand situation. It is a serious matter.

I think it is a mistake to single out the Tomahawk as a special issue in the nuclear versus conventional capability of our military force structure. It is no different than our tactical aircraft in Europe, for instance. It is no easier to tell whether an F-4E has a nuclear bomb or a nonnuclear bomb on it than it is a Tomahawk.

We do not expect to increase by any appreciable amount the number of ships that have some kinds of nuclear weapons capability as we deploy Tomahawk. Tomahawk's great value is in its antiship, its conventional, and its nuclear land attack capabilities—all from the same launcher and all dispersed on all of our combatants.

We think that all nuclear weapons are legitimate subjects of arms control attention, and we do not think that Tomahawks provide any more difficult a problem for arms control verification than our already-existing systems. It is my personal belief that to get meaningful, substantial progress for the long term in arms control that we must have onsite inspection techniques as part of the negotiations.

The Navy stands ready to accept whatever intrusive means of arms control inspection, including allowing Soviet inspection teams aboard our ships, negotiated by our national negotiators. We are ready to do whatever is necessary to verify such arms control on a bilateral and mutually verifiable basis.

Senator COHEN. Mr. Secretary, at a time when there is talk about closing existing military bases in order to accomplish or effect some savings, the question I have is, is it inconsistent to be looking for new home ports for Navy ships?

HOME PORTING

Secretary LEHMAN. Well, I had the good opportunity a couple of weeks ago to fly Senator Goldwater over pier 12 at Norfolk to show him——

Senator COHEN. You did not let him have the controls did you?

Secretary LEHMAN. Yes, indeed, and I can attest to how smooth a stick he really is. But I think it is self-evident there that we have nearly 120 ships home ported in Norfolk. We have nearly 60 ships home ported in Charleston. And we intend to home port considerably more in Charleston. We do not have room to add any more ships appreciably in either San Diego or Norfolk. The same is true in most of our other port areas.

As you know, during the 1960s and 1970s the Navy closed down a great many bases as we engaged in the unilateral naval disarmament, cutting our fleet in half. We got out of Boston, Newport, Philadelphia, and many other areas as well. We now need to take the additional 130 ships that are coming in at the rate of about 20 a year and disperse them in the most cost-effective, economic way to ports that militarily are the most effective in dispersal and economically are the lowest cost.

We think it makes a lot of sense and that it will be done, as we are doing it now at the absolute minimum cost to the taxpayer. Also, we are going only where we are welcome. As Secretary Weinberger has rightly pointed out, the political leadership of communities like New York cannot have it both ways. They cannot have the ships, and the jobs, and the payrolls but say no thanks to the weapon systems that may or may not be on board.

So we want to make sure that there is strong, complete consensus in the community that the Navy is welcome; otherwise we will not go there.

Senator COHEN. You talked earlier about competition. We have saved in the Aegis cruiser program about $100 million. I would like to say there was very fine work done in Maine to contribute to that saving. But, more importantly, my understanding is only about one-third of the costs of those ships are actually competed between the shipyards, and that about two-thirds go for Government-furnished equipment.

I was wondering what are you doing to get more competition into the so-called GFE?

COMPETITION IN AEGIS PROGRAM

Secretary **Lehman**. We have a major program to compete the components and now also to compete the systems integration of the Aegis Program. The competing of the components and hardware is now well along—the second-sourcing of them. We started in September a program to second-source the integration, which is now sole-sourced to RCA. RCA is doing an excellent job, but we are so dependent on that system for our destroyers and cruisers that we must have a second source, and we are well along on that.

Senator **Cohen**. I just have one more question, Mr. Chairman. I would like to direct it to Admiral Watkins.

We have heard a lot about the growing Soviet mine-laying capability, but in addition to Soviet mine-laying capability there are other surrogate nations, if one can classify them as such, who are also engaged in mine-laying activities. I was wondering about Libya in particular.

Do you have anything you could tell the committee with respect to activities that Libya or other countries might be engaged in with respect to mine-laying?

MINE OPERATIONS

Admiral **Watkins**. Well, as you know, Senator Cohen, we were heavily involved in supporting the mine-clearing operation in the aftermath of the Libyan plant of the Soviet mines in the Red Sea area. Now I say Libyan plant of Soviet mines and, of course, that is the controversial issue.

Senator **Cohen**. What is controversial about it?

Admiral **Watkins**. Well, because I think, Senator Cohen, it is strange that an act of war, mining an international waterway, has received such little play in the aftermath of the smoking gun exposed on the Libyan ship, the Ro-Ro [roll on/roll off] ship, *Ghat,* Its crew clearly was geared up to go in there and lay mines. Our operations included recovery of a Soviet mine, a modern mine—in fact, a fairly sophisticated one we had not seen before, which could be both submarine-launched as well as pushed over the side of the ship. We went into the gulf, after observing 20-some explosions albeit with no real damage done to the transiting ships; but now it's business as before, with very little post-mine-clearing diplomatic discussion.

In mine-clearing operations, four nations were involved, with heavy commitment of resources, and yet very little was done to explore and punish the villain. I do believe there is still concern on the part of some of us that have to supply those forces that much is left undone. It is too risky to go in with mine-clearing helicopters and ships and put divers at risk, not to mention the threat to the Government of Egypt, and the Suez Canal, and the economic situation there, to allow this situation to essentially deteriorate in urgency for continued international debate.

Secretary **Lehman**. As you know, the Brits actually recovered a new Soviet mine as part of their mine-sweeping operations. There is no doubt where they came from.

Senator **Cohen**. Are there any plans to file a suit in the International Court of Justice?

Secretary **Lehman**. That is a question for the State Department.

Senator **Cohen**. Thank you, Mr. Chairman.

Chairman **Goldwater**. Senator Nunn.

Senator **Nunn**. Thank you very much, Mr. Chairman.

Mr. Secretary, Admiral Watkins, General Kelley, I welcome you here this morning. I did not hear all the chairman's statement on retirement, but generally, without having heard every word, I wanted to associate myself with his remarks.

It tells you something about the climate we are now in, in this whole defense debate and the dilemma we face on the $200 billion deficit, when you consider that about a week ago, I think, a spokesman for the Secretary of Defense—I do not believe he said it himself—basically said that people who wanted to cut the defense budget were not concerned about national security, or at least to the extent they should be.

And then yesterday we heard OMB Director Stockman say that those in the Pentagon, in the military uniform particularly, who did not want to cut the military retirement system were not concerned about national security.

So within 1 week we have had two top spokesmen for the administration come at the whole subject from two different points of view—first, those who want to cut are not concerned about national security, and, second, those who do not want to cut are not concerned about national security.

If we are going to have a rational debate both on fiscal policy and on defense policy this year, I think we ought to concede that the people in the Pentagon are concerned about national security. People in uniform, in my opinion, do not go into the military or serve the military or risk their lives for this country because of the retirement system. They do so because they love this country and what it stands for.

So I wanted to explicitly disassociate myself from any implication that the people who serve this Nation, from the junior enlisted man right up to the top, are not concerned about the national security of the country. I think they have been, and I may or may not agree with all their views on military retirement, but I certainly do not believe that those differences of opinion divide us along the lines of those who are concerned and not concerned about national security.

I also want to say that those in the Congress of the United States and in the administration who believe that we have to have an overall plan toward military spending which takes into account the fiscal condition of this Nation and which defines our national security in the context of our overall economy and position in the world should be accorded the courtesy of conceding that they, too, are very concerned about our national security.

So, I would hope the last week of comments—I think very extreme comments—on two different occasions are not the forecast for the kind of debate that is needed. We have to have a rational debate among people who are very concerned about national security and who love this country, but, who may have genuine, sincere differences about the direction of spending.

On the question of the retirement system, it is sometimes strange to me that those who decry most of the personnel costs are also the most fervent believers in the abolishment of the draft and volunteer force. I realize that there are differences of opinion on this subject, but an awful lot of the things that we do in the name of personnel management now relate to recruitment and retention.

The retirement system is one ingredient of that. It is not the only one. But to believe that we can have all things easily and to believe that we can say we are enticing people strictly on the free market, supply and demand money benefits, and at the same time decry any thought of going back to what worked for this country for a long, long time—that is, a degree of compulsion at the front end of a military career—seems to me to be mutually inconsistent.

I believe that we need to look at the retirement system. I think that the retirement system we have in the military today was one that was installed back in a period where pay was woefully inadequate, where we had a draft, where we basically had a totally different compensation system than we do today, and when, first and foremost, we had an enormous number of people who were actually serving in combat and the whole military system was geared to a very high ratio of people out in the field who had short careers because they were in extremely dangerous positions.

Today we have a totally different world. We have a relatively small number of people in combat, a huge number of people who are back doing technical jobs. We have a military pay system today that is not geared to the modern world. When truck drivers basically get the same pay as skilled computer operators, you know something is out of whack.

So to look at the retirement system in isolation from the whole question of the volunteer force is impossible, in my opinion. To look at the retirement system in isolation from a pay system that is, in my view, not geared to modern times, is totally unrealistic.

To separate the retirement system from what I also consider to be an outmoded policy of up-or-out, when you really need to retain people with critical skills long beyond 20 years, to have people retiring at the age of 42 and 43 and 44 when they have the most critical skills we possibly could desire in the military and then have to start all over to recruit young people and train them for years and years at enormous cost and have them compete with the private enterprise system all the way, is totally unrealistic.

So this whole area has to be looked at, and I think it is a real mistake to look at the retirement system in isolation from those other factors. We do have, I think, a real obligation to review this whole range of issues.

Mr. Chairman, I know that we have a time press here. I do have an opening statement on other parts, and I will just summarize it very briefly and then come back on my questions.

I want to mention several general themes which I think the committee must emphasize this year. First, do we have a strategy that has realistic links to resources, not just those available this year but those that will be available for the next 5 years.

Second, are the military outputs commensurate with the high levels of input?

Third, are we buying an appropriate mix between major combat platforms and the weapons launched from these platforms?

And, finally, something I am going to be harping on an awful lot this year, are we buying too many different combat items and producing them all at too inefficient production rates? We have done some analysis in this area as far as the Navy budget is concerned. There are some 50 major production lines or programs in the Navy. Compared to the rates projected last year, the Navy has stretched out production rate on 11 systems and deferred procurement of 4 more. These actions, I think everybody would concede, will likely result in higher program costs.

To the Navy's credit, they have increased the production rate on eight systems. It is interesting to note that the stretch-outs and deferrals are generally in platforms, while the production rate increases are in the area of weapons—that is, missiles, torpedos, et cetera.

I want to commend the Navy for increases in this latter area, but I note that we continue to stretch out the high cost systems, where fixed overhead is spread over smaller quantities, and I think we have got to come to grips with that issue. I do not have a magic formula, but I think we have all got to start thinking about it.

I think we also should give credit where credit is due. In particular, I want to commend Secretary Lehman for his continuing efforts to improve the procurement process, for his, I think, extraordinary attention to the overall area of military procurement. Notwithstanding the recent episode which we have heard a great deal about, I think overall the Secretary deserves a great deal of credit for his attention in that area.

And I think he has also taken some very hard, tough negotiating stances, and I think that is, in my view, what the Secretary of the Navy should be doing. So I commend you for that, Secretary Lehman.

You and I disagree on some other areas, and we are going to continue to disagree on things on strategy, but I think we should give credit where credit is due in terms of management.

Mr. Chairman, that completes my opening statement and I will have questions, but I will waive my time now because I took longer than I intended. But I did think we should try to put this whole question of military retirement in some degree of the proper context.

I would say, in closing, on the retirement issue that unless those in the Pentagon and the military take these series of issues and begin to address them seriously I do not think it will happen this year, but over the next 3 or 4 years you are going to see this issue taken away from you. You are going to be in a very defensive posture because at some point in time it has to be addressed and I think all those issues have to be looked at together before we can come up with a coherent plan for the future.

Chairman GOLDWATER. Senator Thurmond.

Senator THURMOND. Thank you, Mr. Chairman.

Secretary Lehman, Admiral Watkins, and General Kelley, we are pleased to have you with us, and I want to commend you gentlemen for the fine job you are doing in the Pentagon and in fact the entire Defense Department I think today in the Defense Department is the most efficient that I have seen since I have been here, in 30 years. I am very proud of the work being done.

In some instances there have been a few things, such as coffee pots and toilet seats, and so forth, but these have been greatly exaggerated and I want to commend the present Defense Department for detecting these things and having the courage to expose them and letting the public see what has been going on and that it is being corrected. Now the Navy has made great strides toward the goal of a 600-ship Navy and you can be proud of that fact.

And, General Kelley, in my trip to Parris Island I was consistently told that the quality of Marine recruits has never been better. I know you have a vacuum in your life, since you never have surveyed Parris Island, but at the same time we will forgive you for that. It seems that the Navy and Marine Corps are in excellent health and I certainly hope that that trend continues.

I am concerned, however, about our mine warfare capability. The Soviets place great emphasis on mine warfare and have an advantage in this area that will continue for the foreseeable future. It seems to me that more emphasis by the Navy and this committee on mine warfare may be in order this year and I certainly hope so.

Now I want to associate myself with the remarks that I understand the distinguished chairman, Senator Goldwater, made about Mr. Stockman's remarks and also with Senator Nunn. I want to say that the retirement system in the Defense Department I am sure is not perfect. It may need some modifications. It needs studying. We need to continue to study matters to improve them all the while.

But I do not know of any group of people that deserve more consideration than those who wear the uniform. They are shifted from one place to another. Their family life is disrupted. And they are subjected to hazards, subject to being sent into combat at any time, and I am sure that a lot of people who might do this criticizing would understand better if they had served with the defense forces in Grenada, and Beirut, and other places.

Now when we go considering these retirement systems, though, I hope that just the Defense Department will not be singled out. What about the civilian retirement and what about congressional retirement? I think we have got to look at this whole thing in perspective and do what is just and right, and if it has to be preference shown in any way, because of the hazards of the military I say give them the preference.

RECRUITING TRENDS

Now, General Kelley, the Army has experienced a drop in recruitment and the reenlistment rates for first-time soldiers. Has the Marine Corps experienced a similar trend?

General **Kelley**. No, sir. We have not at all. As a matter of fact, our recruiting statistics show that we exceeded our exceptionally high goals for fiscal year 1984. In terms of retention, we recorded an all-time high so we are not experiencing that trend.

Senator **Thurmond**. Admiral Watkins, how much in the Navy?

Admiral **Watkins**. Senator Thurmond, we are beginning to see the first signs of decline. It is quite typical in the Navy to follow behind the precursor indicators of the Army. We noticed that same trend during the period of the draft. Now the Army is beginning to see some signs out there in the private sector that make it tough, a trend that we predicted because of the demographic decline in the number of 18-year-olds entering the work force.

In my more formal statement, Senator Thurmond, I have a figure, figure 7, which shows a decline in what we call the delayed entry pool. This is the bank of young people waiting out there to come in the military. We are very proud of the fact that just a year ago we had 48,000 young men and women wanting to come in the Navy, willing to wait 6 to 8 months because we did not have room for them quite yet. That number is now declining.

During the last decade, when that number reached about 33 percent delayed entry pool, that is the bank of people that our recruiters can leave there to help them achieve their quotas, that number was recognized as the low level of acceptability. That is when we were getting in the lower quality young recruit. That decline is given under way today. But it is something we can control. We can ask you for more recruiters and more advertising money, as we have in this budget. On the other hand, it is a sign that we are going to see the competition between the private sector and the military grow as we approach the increasingly lower number of young people coming into the work force in the Nation. In fact, by fiscal year 1988 one out of every two eligible, physically eligible, male will have to come in the military if we continue with the current practices.

This is a rather startling figure, but that is what the demographics show and that is what the DOD reports and all the studies show. So the time has come when we are fast approaching that point where demographics become critical. I think now is the time to be reviewing the situation and to begin the debate, rather than allow the trends to continue, only to find ourselves in extremes, as we were in the last decade, unable to pull out because it was too politically difficult to deal with such things as a national conscription. Nobody likes to debate this subject, but I think it is probably time to debate it, accept the demographics and be ready. We are seeing the signs now, and you are going to see requests for additional funds to go fight harder to recruit these people of the high quality.

We are now projecting an 89-percent high school degree/diploma holder achievement in fiscal year 1985. Last year, we achieved 93 percent. So we see a steady, slow decline in that high school degree/diploma indicator. The Army is seeing the same sorts of indicators.

Usually we are right behind the Army. The Marine Corps and the Air Force seem to do much better than we do in holding up that quality, but they will eventually have to follow suit as these demographic changes take place in the Nation.

Senator **Thurmond**. Thank you very much.

I had a few questions here on strategic home porting and chemical weapons, but I have to be at another hearing to introduce the new EPA Director in 10 minutes and I have to go. If you would kindly answer these for the record, it is just three or four more questions.

Thank you, Mr. Chairman.

Chairman **Goldwater**. Thank you very much.

Senator Bingaman.

Senator **BINGAMAN**. Thank you, Mr. Chairman.

Let me ask, Mr. Secretary, if I could, about the outyear budget figures that you are working with in making up your program in the Navy. I understand from your testimony that the average real growth the last 4 years has been 7 percent, you indicated. The Secretary of Defense in his testimony to us a few days ago, indicated that his estimate of 1987 is 8.2 percent real growth for the Defense Department as a whole, 8.8 percent, I believe, in 1988.

I have the distinct impression that these are not realistic figures for the future years, and I am concerned that perhaps the services are developing their program on the basis of those figures, and that may explain some of these stretchouts that Senator Nunn was referring to. We start more programs than we can fund adequately.

I would like to know what figures you are using for developing programs in the future, to the extent you can tell us, and what figures you think are realistic expectations out of this Congress in the next few years for real growth in the Navy funding.

REAL PROGRAM GROWTH

Secretary **LEHMAN**. Our Navy and Marine Corps budget is planned for the outyears based on those figures of real growth. Contrary to the popular perception, the Navy has not had the largest share of growth: in fact, in overall percentage growth, the Navy—the Navy and Marine Corps—has been the lowest over the last 4 years in percentage of growth of its budget, by a substantial margin, I might add.

So we think projecting ahead roughly the same real growth that we have had in the past, which is in that 6 to 8 percent category that the Secretary was talking about, does adequately meet all of the needs of the force contained in the 5-year defense plan [FYDP].

I believe it is prudent for us to plan on that continued real growth, because, I think that our responsibility to you is to derive our program not from what our crystal ball tells us the political winds will produce, but from what the threat requires, and within the realism of what is a sensible proportion for the Federal budget. We think that 7 to 8 percent is well within the prudent range, regardless of what the economic situation is because the economic situation is not the direct determiner of our level.

I think we will get it. We have gotten it in the past. I think we will continue to get sufficient real growth in the future to continue the program.

Senator **BINGAMAN**. Let me ask about the SALT II agreement. I understand that to date we have stayed within the limits of SALT II and if that is going to continue, if we are going to continue to stay in those limits, that we need to take some action to dismantle our capability in some respects this year.

Could you indicate anything you could to the committee about what action you are taking or intend to take, what our policy is with regard to staying in the SALT II——

SALT II

Secretary **Lehman**. Yes; the issue will center on September 17, when *Alaska,* our seventh Trident submarine, goes on sea trials. That would, if we did nothing else, put us over the SALT II limit for MIRV missiles. So, as a result, we have spent $5 million of 1984 money and house sufficient money in the 1985 budget to carry out the dismantlement of *Poseidons MIRV'd submarines to meet that limitation.*

We have all of our options covered. We also have sufficient planning to keep those *Poseidons* in the force, if that is the President's decision, or to dismantle them, if that is the President's decision.

Senator **Bingaman**. On this retirement issue that Mr. Stockman raised yesterday—we had testimony in the Procurement Subcommittee the other day from Mr. Pownall, who is the head of Martin Marietta, I believe. We were talking to him about the revolving door, people coming in from the military into the private sector, and he said it would be a shame to lose the talent of these people who are coming out of the military in their early forties and not have them available for the defense industry.

Would you agree that it is perhaps a shame for the Defense Department and the various services to be losing that talent at that same time, along the lines that Senator Nunn suggested?

RETIREMENT

Secretary **Lehman**. There is not a simple answer to that, Senator. It is a mixed picture. We need the up-and-out requirement to keep a pyramid and to keep an efficient force. I think one of the disadvantages of the civil service, from my perspective as a manager of the resource side of the Navy, a disadvantage of the civil service is that there is no way to encourage our people who have passed their level of, shall we say, optimum productivity.

We have no way to lean the force. In the military, we do. We have the 20-year retirement that enables us to remove from the service those who are no longer required, and that includes a very large range of people in the non-high-tech areas. I think it would be a tragedy to lose that 20-year retirement.

However, Senator Nunn's point is a very valid one. We do not like to see our expensively trained, highly productive, high tech, hard-skilled personnel leave at the 20-year mark and go to industry. I believe the better approach is to make sure we have sufficient incentives, with selective reenlistment bonuses, and with sufficient upward mobility in the career structure to keep in the high tech, highly valued people we want to stay to 30 or 40 years.

I think we have proved that, with the judicious use of the bonus systems and the special pay and incentives that this committee really pioneered 5 years ago, that we can do that. We can, if we keep that attractiveness at a certain level, hold the people we want in, while allowing to proceed to other pastures those people who have passed their optimum productivity for the Navy and Marines.

Senator **Bingaman**. Let me, Mr. Secretary, ask you about the President's request that we increase defense salaries 3 percent and cut civilian salaries 5 percent throughout the Federal Government.

In your view, is that justified in your Department or throughout the Defense Department?

MILITARY AND CIVILIAN SALARIES

Secretary LEHMAN. Well, I think that as a rule our military personnel are grossly underpaid for what they have to put up with. You yourself have seen the role that sailors, aviators, marines, and soldiers play out on the front lines, deployed away from their families 7 or 8 months a year, 14 years out of their first 20, the hazards they undergo.

Just in the Navy and Marine Corps in the best year we have ever had, we had 79 aviators killed in peacetime training—the best year we have ever had. So I think 3 percent is woefully inadequate as a pay raise. It just barely keeps up with inflation.

I would not endorse the position, from a merit point of view, that our civil service deserves a pay cut or a pay freeze. They do not. I think that, by and large, we have some of the most underpaid and committed people in the civil service as well. I understand the fiscal realities that require those kinds of approaches, but I believe it would be a terrible, terrible repeat of the mistakes of the 1970's to allow pay freezes to become a way of dealing with budgetary shortages.

Senator BINGAMAN. Thank you, Mr. Chairman.

Chairman GOLDWATER. Thank you.

Former Secretary of the Navy, Senator Warner.

Senator WARNER. Thank you very much, Mr. Chairman. I first want to praise this leadership now being shown by the Secretary, the Chief of Naval Operations and the commandant.

If we look at retention, gentlemen, I am sure that those considering career patterns in the military look to the very top, and this Navy-Marine Corps leadership indeed has provided that incentive for many to stay on. I congratulate all three of you.

Mr. Secretary, of course, you are crossing the 4-year mark. Not too many have stayed that period of time. But speaking as one who has, I want to address this unilateral disarmament period that you spoke of in the 1960's and 1970's. I hope that you might follow a practice that we have here on the Hill—to revise and expand your remarks on that comment, namely that those in the civilian capacity at that time, faced with a fleet of about 1,000 ships, give or take a few, in the late 1960's and 1970's, were confronted with a basic decision.

Do we perpetuate a World War II configured fleet, or do we begin to retrench and reinvest the moneys for a modern fleet? Indeed you will go down in history as the father of the 600-ship Navy, but do not brush aside your predecessors, who laid the foundation on which you are building the 600-ship Navy today.

Now, I wish to associate myself with the distinguished chairman and ranking minority member, Mr. Nunn, with respect to retirement, and I am pleased to see that the military in its traditional fashion of dignity and composure did not try to lash back with remarks of equal fervor to those extended by Mr. Stockman.

I would think, Mr. Secretary, if you want to solve the Stockman problem, take him aboard a carrier for night ops, put him in the

A-6, and bring him in on the deck and then bolster him. [Laughter.]

Mr. Secretary, I was reading your statement here and you quite properly cite the President's statement, one which you have reiterated many times, and that is America being an island nation has a duty to maintain "maritime superiority."

You address what you have done with the U.S. Navy with the assistance of the Chief of Naval Operations and the Commandant and many others, but what is your judgment with respect to the direction in which the Soviet Union is going and where we are in this race in which for the moment you are deadlocked with Admiral Gorshkov?

CAPABILITIES OF THE SOVIET UNION

Secretary **Lehman**. Senator, I think that we are now back into the gray area where it is a judgment call. Maritime superiority is a concept that simply means that we must be able to prevail in establishing our ability to use those sea lanes in war that our coalition defense depends on.

Four years ago, it was very clear that we could not do that in all of the areas that were essential. We just had too small a fleet, whose readiness had sunk too low. As I mentioned earlier, we have added 20 percent to our surface combatant capability, and 40 percent overall to the readiness of that fleet, 40 percent added to the submarine availability in that period. So we have made very real, measurable strides in that 4-year period to close the gap.

The response we have seen from the Soviets is the one that we predicted. For the period of the 1970s they were about at capacity, building an average of more than 10 submarines a year, more and more modern technology but fewer units than in the 1950's and 1960's. We have seen a slight decline in the actual production rate of their fleet in the last 4 years. There is not much they can do to respond to our restoration of our minimum capability. They are at maximum production, with four yards producing submarines, and to go beyond that across the board is just not possible.

We are seeing them, as we expected, concentrate on using our technology to increase their capabilities. They are going to nuclear power for their first large carrier. They are going to much more sophisticated weapons systems on their new cruisers, and on their two new destroyer classes, and most dramatic of all has been the increase in the capability in their submarines and the ability to steal our technology in quieting and signal processing and apply it very rapidly.

I think the CNO could expand on that as well.

Senator **Warner**. Touch first on the quality of personnel that they now have. We have the scientists. Are they able to attract, forcibly or otherwise, the quality and to retain the people they need? There was a time when they did not have as good a petty officer and junior officer.

SOVIET MILITARY PERSONNEL

Secretary **Lehman**. I do not think there is any doubt that we have much better quality in terms of basic raw material and training, but they are getting better. The professionalism and the performance that we see in their force, across the board, is totally improving. They are becoming a much more professional navy than they were before.

I think the CNO ought to comment.

SOVIET NAVY PROFESSIONALISM

Admiral WATKINS. I think we can say this: they will do whatever is necessary. If that means putting more thumbscrews on the people, they will do it. You remember about 20 years ago only about one-third were Russian-speaking. Today about half speak Russian.

When they want engineers, they crank out engineers—10 times what we are doing in this Nation. So they solve their problems that way. We do not emulate these undemocratic practices, but that is the way it is.

This does not give rise to the kind of initiative, the American spirit, that we have on our team. Ours are highly honed teams and will do the job three times as well as the Soviet teams. There are a lot of them 6 feet tall, but none of them are 10 feet tall.

I think that what we are seeing is, as the Secretary says, a steady improvement in the overall professionalism of their navy. We see them submerged, on the surface, in the air daily, worldwide, because we share the same waters. It is unique to the Navy to be able to be eyeball to eyeball with a potential adversary day after day. So we have watched their improvement, their manners at sea, and the like.

On the other hand, we know they have difficulties. They have had a number of submarine disasters. They have had some serious problems in explosives. The one at Severomorsk, as you recall, just a few months ago, was very serious.

They have a different outlook and a different concept toward their people. We are interested in human beings, I think, in a way that will inspire leadership and a winning team in wartime, and that continues.

So, I do not see any real shift over the years one way or the other. They solve their problems to the degree they need to.

Senator WARNER. Well, in one quick sentence how would you rate the race today between the Soviet Navy and the United States Navy?

NAVAL CAPABILITY RACE

Admiral WATKINS. I think the race today is moving in our favor. I think we are closing the gap. I have said publicly, and I believe very strongly, that 4 years ago, when Tom Hayward, my predecessor, used the term "We are in the gray zone of uncertainty," he did not know whether or not we could prevail, assuming we and our allies all worked together. Today I sense that we are walking out of that gray zone of uncertainty and I think we are going to achieve our objectives by the end of this decade, the goal set at the first of the decade. We are moving in that direction in all areas.

We have the self-confidence now, I think, as a nation and as a military to get into the foray without questioning whether or not we are going to fail. We think we will win. Now that may be more emotional than factual and you can do all kinds of analysis, but I believe we are walking out of it. I think as we approach the culmination of the continuing support of the national security posture in this country over the rest of this decade, as planned, at about the growth rates that were discussed earlier, that we are going to achieve the necessary military forces to do our job. This includes the superiority at sea, which is absolutely essential to keep clamps on adventurism that will otherwise occur, as it did in Afghanistan.

Senator **WARNER**. When you say you are closing the gap, at what point do we regain that superiority, in your judgment?

CLOSING THE GAP

Admiral **WATKINS**. I think we are in the transition phase now. By the end of the decade we will be, in my opinion, clearly there. That assessment is based on the analysis of their improved technology, our ability to control ours, and the willingness of the Nation and the Congress to help us achieve the kinds of objectives that have been laid out in the 5-year defense plan.

Senator **WARNER**. Mr. Secretary, the last question I have on this first round is with respect to the strategic forces and the retirement of the *Poseidon*-class submarine. What is your view on that and when must you begin that retirement?

POSEIDON CLASS SUBMARINES

Secretary **LEHMAN**. Well, happily I can duck that question because it has not been my portfolio to talk such high policy. I think that we have covered the options, to go whichever way the President decides to go. The *Poseidon's* that would be destroyed have a lot of life left in them. They are very good, capable systems with the 14-warhead C-3 missile.

Senator **WARNER**. If you are going to duck the question, let us save some time.

Turn to the E-6A. You are committed to the E-6A program to complement the Trident system?

E-6A AIRCRAFT

Secretary **LEHMAN**. The E-6A system is a very valuable modernization of the TACAMO system and at these budget levels, we need it.

Senator **WARNER**. You are going back and forth during the years. Where is it now? Are you solidly behind this program?

Secretary **LEHMAN**. I am as solidly behind it as you are solidly behind the growth we have got in the budget.

Senator **WARNER**. That is two you have ducked.

Thank you, Mr. Chairman.

Chairman **GOLDWATER**. Do you want to talk about the Navy or a machinegun?

Senator **DIXON**. Well, I have the letter for you here, Mr. Chairman, but I was going to spare the details for the committee right now since we are on the Navy and deliver it to you personally later. Either you are a better shot, or I have a worse gun, though, I will tell you that.

Chairman **Goldwater**. Well, he is the Navy Secretary, so do not ask him about Army weapons systems. Go ahead.

Senator **Dixon**. Mr. Secretary, you stated in your testimony that you are closing in on a 600-ship Navy and the admiral has stated that he has problems acquiring sufficient personnel. I think he even said that by, was it, 1989, the problem would be that one out of every two 18-year-old adults would have to be in the service to adequately staff the positions that will be available at that time.

I guess my simple question is how do you plan to staff a 600-ship Navy without the necessary personnel in the next several years?

MANNING THE 600-SHIP NAVY

Secretary **Lehman**. Well, we cannot man a 600-ship Navy if we cannot get the personnel. I believe that the demographics that Admiral Watkins outlined are a cause for watching carefully and seeing that we keep the attractiveness of the service as high as it is now. We do not have a problem yet, but we have warning signals in the shrinking of the waiting entry pool.

We have not fallen below any of our quotas in recruiting or any of our quotas in quality as well. These are cautionary signals ahead to worry about. If we do not, if we cannot make our quotas——

Senator **Dixon**. Mr. Secretary, if I may interrupt, is there not evidence beginning to grow that as the economic experience in our society improves that we are beginning to see a slight downward trend in enlistments under a voluntary system?

RECRUITING

Secretary **Lehman**. Yes, except that it is not to the point yet where we have not been able to reach 100 percent of our quotas, including quality. It is the delayed entry pool that used to be about 6 months has now shrunk to maybe 4 or 5 months. If it continues to shrink and we start to fall below 100 percent of quota, then we have got problems.

But I do not believe that there has been the direct correlation that some have warned about of the improving economy and lowering unemployment, because we have seen nearly 1 full year of undiminished quality and recruitment and retention while unemployment was down to around 7 percent. It is a question of perception of attractiveness of the service and I think we will continue to make the quotas.

I do not think that the demographics have shown the direct correlation to recruiting—because we have been in that same decline all during these 4 years. The pool of available people has dropped nearly 8 percent in those 4 years, yet we have seen no diminishing of our ability to attract them. So the question is one of maintaining the attractiveness of the service.

If we cannot do that, if we cannot man the ships, then we will have to tie them up and we will not have a deployable 600-ship Navy.

Senator **Dixon**. How do you answer in a general way what we hear in our committee work here on the Hill a good deal by critics of our defense buildup, when they say that—and I do not mean this specifically of you but of all of the branches of the service—that you keep buying all the big ticket items, massive amounts of money spent for that, without the supporting personnel, ammunition, and other things for the systems, and kind of a perception here that there is even some design to do that in the services so that later we have to come forward with all the other things that are necessary to support those big ticket items?

What is your feeling on that?

BALANCE IN THE BUDGET

Secretary LEHMAN. Well, I think you will see a real balance in the program we put forward and, I think you will see a balance in the results. You know, a 30-percent increase in ship readiness ain't something to sneeze at. The jump of nearly 46 percent in overall aircraft squadron readiness in 4 years ain't something to sneeze at. That is real accomplishment based on tripling the amount of money we are spending on spare parts and getting up to 100 percent manning over a period of 4 years; 4 years ago we were only at 91 percent manning.

So I think it has been a very balanced program. You will see in the posture statement, the steady state at which we have increased our ammunition stocks, our overall sustainability. It has been a steady progress. Balance is necessary. I think, as Senator Warner——

Senator DIXON. For what period of time do you have sufficient ammunition stocks right now?

AMMUNITION STOCKS

Secretary LEHMAN. Well, we have about 60 percent more ammunition in the bins today than we had 4 years ago, plus the biggest increases are yet to come because the big funding increases started in 1982. It takes about 2 years from the time you sign the contract until you get your first deliveries, so the bigger increases are now under contract and under construction.

But already we have had enough deliveries to increase the overall stocks of the bigger Navy and Marine Corps 60 percent. We think that by the fiscal year 1989 budget, we will have the full JCS objective of warfighting sustainability at the pace we are going now. It has not been bow-waved into the future.

Senator DIXON. You stated in your testimony that you have increased your inventory of combat ships, I think you said, from 479 in 1980 to 523 in 1985. Was that the figure?

Secretary LEHMAN. At the beginning of fiscal year 1985, yes, it is up to about 530 today.

Senator DIXON. How many of those ships were delivered during these 5 years that were authorized since 1980, do you know?

Secretary LEHMAN. All but five were authorized prior, but that figure is a net figure, that is, a balance of retirements against new deliveries.

Senator DIXON. But all but four were prior?

SHIP RETIREMENTS

Secretary **Lehman**. They included ships laid down by Franklin Roosevelt to Richard Nixon, and President Ford, and President Carter, but the biggest increase came from the cancellation, thanks to the additional funds we had, of the retirements of the LST's, the DDG-2's, and DDG-31's, and the *Coral Sea* and *Midway* that had been planned under the fiscal guidance we inherited during this period.

So we canceled those retirements and overhauled them instead. We now have 13 instead of 12 carriers because the *Coral Sea* is newly modernized and at sea again instead of being turned into razor blades. We reactivated the battleships. And, that is where we got the large net increase as opposed to counting only the new deliveries, which were all prior year, except for five ships.

Senator **Dixon**. Do I have time for one more question, Mr. Chairman?

Mr. Secretary, I want to share the statement of my ranking member about my appreciation for evidence we see that you are trying to expand competitive bidding opportunities in the branches that you control and so forth. While you and I had a difference one time, you and the Senator from Georgia apparently have have had, in my case over a camera for a naval fighter plane, in general I have found you an entirely agreeable person to do business with, and I congratulate you on your efforts in the area of procurement.

I wonder if men like you are aware of the problems in parts of the country, such as mine, as a consequence of the immense continued growth in our spending for defense commitments with the declines on the other side, on domestic expenditures so far as our economic circumstances are concerned. My State has been sending more money down here than it gets back for over 30 years—sent $1 down for every 75 cents it got back last year. It does not build airplanes or ships.

It has a lot of very good businessmen who could supply a lot of procurement needs of the Navy and the Marines so far as subcontracts and other things are concerned. Do men like you have concerns for that situation in States like ours, which are impacted unfavorably by what has occurred over the last several years?

DEFENSE BUDGET AND THE ECONOMY

Secretary **Lehman**. Well, of course you do point out one thing that is often overlooked, that the defense budget creates enormous numbers of jobs and economic stimulation; by CBO numbers some 27,000 direct and 15,000 indirect jobs for every billion dollars in the Navy budget.

But those States that have a net negative I am sure have more sympathy for the arguments to cut defense. However, it is imperative that they understand that today they are carrying nearly half of the burden of servicing the debt for World War II that was never paid. Because of what Churchill called the most avoidable war in history, we ended up spending 40 percent of our GNP on a war, and that is still a major part of our national debt today.

National defense should not be linked to how much entitlement programs are getting. It should be linked to a prudent assessment of what you do about those four nuclear missile subs that are now virtually permanently on station off both our coasts. The fact that we nearly lost the war in 1942 to an average of only 57 Nazi submarines at sea and today there are nearly 270 attack subs available in the Soviet fleet, that is what should set the level of our defense budget, not a relationship to domestic spending.

Senator DIXON. Well, my time is up, Mr. Secretary, but I would like to pursue this with you at length on another occasion.

Secretary LEHMAN. I look forward to it.

Senator NUNN. If the Senator would yield, I would like to get the Secretary to inject into the record at this point the percentage of our national debt now that was incurred in World War II.

Secretary LEHMAN. Yes, I would be happy to provide that for the record, Senator. It, of course, looks much smaller than it, in fact, was because we had the benefit of 2 percent bonds for 20 years until they were rolled over in about 1974. If World War II were to be fought at today's prices according to the Commerce or the Treasury Department the bill would be $4 trillion.[1]

Senator NUNN. Well, that is interesting but irrelevant.

Secretary LEHMAN. Unless another war breaks out, in which case it would be very relevant.

Senator NUNN. Well, I think the percentage of our World War II debt that is being paid now compared to the overall debt, particularly that that has been accumulated in the last 4 or 5 years, is a very small percent.

Secretary LEHMAN. It is about, I believe $70 billion this year to service the World War II debt.

Senator NUNN. Out of what total figure—$1.5 trillion?

Secretary LEHMAN. $140 trillion. It is about half.

Senator NUNN. Half of our amortization is World War II debt?

Secretary LEHMAN. Half of the servicing, I believe, is World War II debt.

Senator NUNN. I would defer to you only momentarily on that until I see the further evidence. I really question that figure.

Chairman GOLDWATER. Is that all you have to say about the debt?

Senator NUNN. For the time being.

Chairman GOLDWATER. I am interested in that, too. I was interested in what the Senator from Illinois had to say; we do not have any naval stations in Arizona either.

Senator WARNER. He has the Great Lakes.

Senator DIXON. You have a few air stations, though, Mr. Chairman.

Senator WILSON. So does Illinois and so do, I think, a number of other States, Mr. Chairman. It may sound self-serving for someone from California to say that our first concern with security should be security rather than its employment implications, because clearly my State benefits enormously from the employment opportunities.

But in one area I am concerned about their decline and also about the decline of our security. I know you share that concern,

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[1] See p. 980.

Mr. Secretary. I am talking, of course, about industrial capacity as it relates to our ship construction program. You have made the point again this morning that 80 percent, at least, of ship construction is being performed in response to military commitments—U.S. ship construction.

I am really concerned, though, that the future of west coast shipbuilding is pretty bleak. I see the fact that the CG-47 work is divided between gulf and east coast yards. I would like to think that we are going to build five DDG-51's per year, but I am not at all certain of that, and the frigate program is coming to a close.

Let me ask you very candidly what you see as the future of west coast shipbuilding.

WEST COAST SHIPBUILDING

Secretary **LEHMAN**. I think the problem of west coast shipbuilding is one that you are well aware of, and that is the wage differential between the west coast, and gulf coast, and east coast yards. That differential is beginning to narrow, but it runs as high as $3 an hour in the extreme cases. That makes building a given combatant, as a generalization, much more expensive on the west coast.

Now the west coast yards have taken major steps to make themselves more competitive and it is essential for mobilization that we keep a ship repair industry on the west coast. I think it is less essential that we keep a shipbuilding industry on the west coast as opposed to our other coasts. I could not foresee accepting the disappearance or the major reduction of our ship overhaul and repair base on the west coast, regardless of what the differential is.

We must have that industrial base there. The construction of new ships is a less clear issue. For example, we have only one yard in the country that builds aircraft carriers. We have only two that build cruisers. None of them are on the west coast. It is conceivable that destroyer construction could also end up only on the other two coasts, if the west coast industry is not able to win the business.

But I am encouraged by the progress that has been made in most of the yards. They really have been bringing efficiency, new investment, and productivity to begin closing the gaps. I think they are going to be good competitors with the gulf and east coast yards.

Senator **WILSON**. I would simply pursue that by asking whether you think the repair capability can exist independent of the construction capability on the west coast.

Secretary **LEHMAN**. Yes. As you know, we have done no new construction for many years in naval shipyards, yet we could build ships there; but they are excellent repair facilities. It is quite possible to keep a very strong repair base without new construction.

Senator **WILSON**. What is the current level of manning, Admiral Watkins, throughout the combat fleet?

MANNING LEVELS

Admiral **WATKINS**. We are slightly over 100 percent, about 101 percent at sea today, which is within the expected fluctuation of our 100 percent manning policy.

Senator WILSON. Well, to pursue the line of questioning that was initiated by Senator Dixon, what do you consider the absolute bare minimum level of manning required?

Admiral WATKINS. During the last decade, when we were down on our personnel knees and we were tying up ships for safety reasons and so forth, we were at about 86 to 89 percent. That was with a squeezed down shore establishment unable to give proper support, and with a very large pipeline having to bring in very large numbers because of the low retention figures. Instability in the system was significant.

The experience level was down so badly that we do not want to allow ourselves ever to get into that situation again. Recovery requires long leadtime. Unfortunately, manpower and personnel, as Senator Nunn knows—he was chairman of the Manpower Subcommittee when I was Chief of Naval Personnel and we used to debate these issues constantly—have to be thought out ahead. Unfortunately, manpower has no constituency.

Manpower is relatively easy to cut, as it was in the last decade when we cut manpower and the special pay programs. Therefore, we were not able to keep up, despite the alleged largess of such a thing as a 20-year retirement system. We had the hemorrhage of talent that Admiral Hayward talked about, and it was really significant.

This just means that now, as in the discussion that went on earlier, there is a caution flag flying, that says we should look ahead and make sure that we maintain the positive momentum we have had in readiness because of the people. The most significant contribution that we have made in the last 4 years with the help of the Congress, was to pay the dollars that we need to keep those skills in the Navy—and you have focused the dollars on the skills, not across the board. Congress has done, I think, the right thing in giving us that focus. We need that continuing support. Keep in mind that when we ask you for additional selected reenlistment bonus dollars and the like, aviation officer bonus pay, the special nuclear pay, that although they are small numbers in terms of the total manpower costs, they are very significant to the readiness of the Navy.

So this is just an alert to watch events carefully. We are making our quality goals now. We are going to make our numbers in the near term. But if we allow support to deteriorate then we will be down to too low a level and it will again take us years to pull out from under its impact.

Senator WILSON. What do you project? We are now at ship 523 of the Secretary's 600-ship Navy. What do you project to be the increase in end strength required at an acceptable level of manning?

END STRENGTH REQUIREMENTS

Admiral WATKINS. This year we have asked the Congress for a 15,000 increase in manpower—that is, military manpower—for the Navy. We feel that that is essential. I have some very thorough analyses in my more detailed report that indicate that if we continue to get the caps levied on military manpower, then we are building an assured catenary of qualified, experienced petty officers by the year 1989. We have already been cut close to 12,000 or 15,000 over the past 4 years.

We can survive with these reductions for a time, but remember we are not building the base of potential petty officers of the future, despite the high retention. So while we can mortgage the future today and you will not see an immediate change in our readiness, in 1989 we will be back before this committee pleading to get our manpower numbers up. So the manning at sea you talked about, Senator Wilson, will not go down, but the vital shore support will.

It is very important, I think, that we give special attention this year to the manpower issue and make sure that we are not going to get ourselves into an assured deficit situation several years downstream.

Senator WILSON. Admiral Watkins, I would be grateful if you would provide for the record a projection of the ultimate end strength that is required for that 600-ship Navy, because I think we have to realistically foresee that coming and foresee that manpower requirement and know what it is going to cost us.

[The information follows:]

600-SHIP NAVY END STRENGTH

The projected end strength required to man the 600-ship Navy is 614,100 and will be reached in FY-90.

Senator WILSON. In that connection, let me ask you, I know or at least I am under the impression that there has been a recent change in your operations tempo. Could you describe that and what the cost implications of that have proved to be?

OPTEMPO

Admiral WATKINS. Well, we have in the budget again requested funds for the same operational tempo we asked for last year. As you know, last year, in fiscal year 1984, the Congress helped us by giving us money back to pay for the Grenada and Lebanon operations and some unexpected operations in the Indian Ocean.

We have again come in with a 29-day per quarter operational tempo for our ships in the 3d and 2d Fleets and 50.5 days per quarter operation of our deployed forces. This will give us a balanced op tempo request. We have asked for full funding for our aviation flight hours. We feel that our budget is well justified in that regard, but it does not mean that there will not be contingency operations for which we may have to come back and ask for additional support again this year.

Now, so far, it does not look like we are going to have to do that, but we never know ahead of time and we cannot fund for those contingencies. Now what has happened, despite the growth of the Navy ships, is continuing high pressure to move around the world and respond to contingencies—witness the Caribbean initiative, which we think is very important. Naval forces and Marine forces lend themselves very nicely to those operations.

The constant presence in the Indian Ocean is required because of the threat from Iran against our own forces in the region. The Secretary of State has sent demarches to those nations denouncing their threats. We have had to put our people on special alert. We are very concerned about the safety of our people in the Middle East Force, and this requires continuous presence.

The threats are still there against our people in Lebanon. This requires the presence of the carrier and sometimes we have to position that carrier over toward the eastern Mediterranean. Additional fuel is expended by all of the various ships that have to go along with that operation.

So it looks as though we have been unable to bring our optempo down with more ships arriving in the Navy, a benefit we had expected to enjoy. We thought if we could just get more ships on line we would be able to cut our optempo and give our people a reasonable life, instead of having them at sea 85 percent of the time when they are deployed and away from their families 70 percent of the time when they are not deployed. We have been unable to do that and it is a great worry to us. It is a retention negative, without any question, particularly on the carriers, which are in such great demand by the national command authority.

Senator WILSON. My time is up. In a second round I want to pursue with you the role of the Reserve as it relates to the current optempo and your commitments, but before I relinquish the floor, Mr. Chairman, I would like to add my voice to the swelling chorus of praise for our three witnesses.

I think that the Secretary, as has been observed, has driven some very hard bargains and gotten a great deal for the Navy's defense dollar, and I would have to say that I think that anyone who has visited any of the posts either here in the United States or overseas will tell you that the quality of the Marines and the Navy personnel that we have encountered is better than at any time that I have observed it, including the time when I thought I provided superb leadership as a platoon commander.

I sincerely congratulate all three of you. You have provided admirable leadership. We have, I think, deserved high confidence.

Chairman GOLDWATER. Senator Kennedy.

Senator KENNEDY. Thank you, Mr. Chairman.

Mr. Secretary, I had wanted to congratulate you, Mr. Secretary, on your willingness to support the onsite inspection of naval vessels in support of an arms control agreement. I would be interested to know whether Admiral Watkins and General Kelley support that position.

Admiral WATKINS. Yes, sir, I would, Senator Kennedy.

General KELLEY. Yes, sir.

Senator KENNEDY. Although your statement does not address the issue, the Secretary of Defense's annual report has a short but a provocative paragraph on new sea-based nuclear systems, on page 221, including a nuclear warhead for the standard missile, a nuclear capability for antisubmarine warfare standoff weapons, and is considering a nuclear warhead for several other systems, including a depth charge, as I understand.

Could you tell us what the rationale is for the new systems? The concern I have is that every time we develop, apparently, an effective conventional system it is only a matter of a very short time before the nuclear capability is brought into those weapon systems, with all of the implications that that has in terms of the possibilities of increasing escalation, and I would be interested if you would tell us what the rationale is for those new systems.

NEW NUCLEAR WEAPONS SYSTEMS

Secretary LEHMAN. Senator, essentially they are modernizations of an existing mission area. The new standoff submarine weapon system with a nuclear warhead is a modernization of the SUBROC system which has long been in the submarine force.

It is there to deter the Soviets from gaining any advantage by going nuclear at sea. If they were to have the knowledge that they could deploy a nuclear torpedo or standoff missile in antisubmarine warfare [ASW] without a like response, that becomes a very significant imbalance, because the use of a nuclear depth charge, when it is known that there can be no such response, provides an enormous advantage.

It is time to modernize that nuclear deterrent in ASW, and that is the purpose of the new standoff system.

Senator KENNEDY. What are the circumstances when you consider using those kinds of weapons?

USE OF NUCLEAR WEAPONS

Secretary LEHMAN. Only in retaliation for their being used against U.S. submarines. You do not have to have the accuracy for a nuclear depth charge that you do for a conventional one. We think that, just as in chemical warfare, the maintenance of a balance in that area prevents the temptation to use them in the future.

So it is not an attempt to add any new nuclear dimension. It is an attempt to bring the latest technology in permissive action links [PAL] and nonsensitive explosives and so forth to the existing capability we have.

Senator KENNEDY. Are you suggesting no first use of these tactical weapons?

Secretary LEHMAN. I would not make any declaratory policy. I would just say that it is de facto tactical commonsense not to use them first in naval warfare.

Senator KENNEDY. On the Standard missiles, do we have any nuclear capability?

STANDARD MISSILE

Secretary LEHMAN. No; not on the Standard missile. We do have a 25-year-old nuclear warhead for the Terrier missile which does not have the insensitive high explosive nor the latest technology in fail safe devices. This would be a modernization. We would like to get the old ones out of the force and replace them with a much safer capability.

Senator KENNEDY. Is that deployed? Is that system deployed?

Secretary LEHMAN. That system is deployed and has been for 20-some years.

Senator KENNEDY. What is the effect on the sensors if you use these depth charges, these nuclear warhead depth charges? What is the impact on the sensor system?

Secretary **Lehman**. Well, I think——

TACTICAL NUCLEAR WEAPONS

Admiral **Watkins**. There is not any question, Senator Kennedy, that the insonofication of the water for a period of time would rule out sensors from anybody in the immediate vicinity. But that situation ameliorates in hours, for example, and the kinds of warfare we are talking about deal in hours, except in the most extreme cases.

While it is a temporary, you might say, blackout of acoustic sensors, it is not there forever. It disappears and our systems are sensitive enough within a short period of time to be picking up the kinds of information we need to continue progressing the conflict.

As the Secretary said, the current imbalance is not something that we like to have. Our feeling is that we have allowed the deterioration of the tactical nuclear forces to take place at a time when the Soviets were giving their program extreme emphasis. People often misconstrue the facts when discussing Tomahawk, our only nuclear-capable cruise missile. They argue that we are proliferating and causing difficulty in arms control. But they do not seem to see that the Soviets have had four nuclear-tipped cruise missiles for almost 20 years, one of which is the SS-N-19, with a 300-nautical-mile capability. We had nothing since we closed down Regulus 20 years ago—20-plus years ago. So we have had to build a Tomahawk.

The Soviets also have built what we affectionately call Tomahawkski, the SS-NX-21 and the supersonic SS-NX-24, which they are about to put into the fleet next year. These are both nuclear-tipped missiles of long range. Therefore, there is again a necessary deterrent to counter what would otherwise be an impossible situation were we not to have at least some retaliatory capability comparable to that of the Soviets.

Senator **Kennedy**. Were there other alternative weapons systems that were considered by the service in the areas, for example in depth charges and others, that were discounted for some reason?

ALTERNATIVE WEAPON SYSTEMS

Secretary **Lehman**. No. Our primary dependence is and remains on the conventional solutions to antisubmarine warfare, but it is our very advantage in high technology in that area that makes us worry about the temptation for the Soviets to go nuclear to compensate for our superiority in conventional detection and kill.

Our Mark-48 torpedo, our Mark-46/Mod 5, our ALWT torpedos, are, we think, considerably better than theirs. Our submariners are better at pinpointing an enemy submarine. So we do not want them to have a temptation to compensate for their lack of ability to pinpoint us by using nuclear weapons. If they know we also have the nuclear weapons, their incentive to use them is much less.

Senator **Kennedy**. I might come back to that at another time. Let me ask just with regards in your statement you talk about the Navy's increasing dependence on space. What would be the effect on your operations if the Soviets were to develop an effective antisatellite capability against high and low altitude satellites?

SOVIET ANTISATELLITE CAPABILITY

Secretary **LEHMAN**. Well, it would be very worrisome to us. We think unfortunately, that they do have the capability to target some of the satellites we depend on most for various surveillance missions. We think that to have the Soviets having radar satellites and other surveillance satellites in space targeted against the Navy is a very useful warfighting adjunct for them.

For us to be denied that same capability, which they now have, would be a real disability.

Senator **KENNEDY**. Increasing the technology or capability of the Soviet Union or of the United States, does that increase stability or is that destabilizing?

Secretary **LEHMAN**. The conventional naval buildup?

Senator **KENNEDY**. No. I was thinking of antisatellite capability against the high and low satellites. There is some degree of competency. There are pretty broad questions on just how effective that is. That is an element that will be considered in terms of the arms control talks. I would be interested from your own point of view how important that is to limit the capability for the Soviets in an arms control agreement.

Secretary **LEHMAN**. I think it would be very important for us to limit their capability to no better than our own. There should be parity so that there is no incentive for one side to use those weapons to knock out the surveillance satellites of the other.

Senator **KENNEDY**. My time is up, Mr. Chairman. If I could, I would like permission to be able to submit some questions.

Chairman **GOLDWATER**. Yes, certainly.

I will now call on Senator Denton, who needs no introduction to you. We are very, very happy to have him back on this committee and we look forward to his contributions.

WORLD WAR II DEBT

Senator **NUNN**. Mr. Chairman, I want to share your observation. Senator Denton was a very valuable member of this committee and we are delighted to have him back. Would you yield for about 10 seconds for just a brief insertion?

Based on that national data, I have this chart here now, Mr. Secretary, at the end of 1945 our national debt was $260,123,000,000 and it did grow a great deal during World War II. It started off at $48 billion and went to $260 billion in World War II.

At the end of 1986, it is estimated—this is OMB figures—it will be $2,067 billion. In 1980 it was $914 billion and has grown to $2,067 billion. So the World War II debt as a percentage of today's debt is 9 percent, and 91 percent is since World War II. As a matter of fact, it was less in 1950 than it was in 1945.

The disturbing thing is that we have gone from 1980, $294 billion to $2 trillion, and we have had a doubling in 4 years, and even more disturbing is that it is projected to go to $2,804 billion by 1989. So we are going to see almost a tripling of the national debt in the last decade.

I thank the Senator for yielding.

Senator **DENTON**. Thank you, Mr. Chairman, and thank you, Senator Nunn, for your kind remarks. They are, of course, reciprocated.

Mr. Secretary, gentlemen, the major thrust of the administration and Congress this year is to cut Government spending to restore some sort of responsibility, a balance between revenues and expenditures, and much of the debate is going to center on how much to cut the defense budget.

That is mastery of the obvious but, while in other years I have been impressed with the ability of this committee—and I still have great confidence in its new chairman and in the majority of the members of this committee to sustain the administration's buildup—President Reagan's buildup in defense this year—I am much less confident that when the President proposes Congress will dispose in that respect.

Therefore, I shall try to deal with some of the fundamentals which we might have to establish on the floor, or we might have to quote in conference with the House, in order to sustain defense appropriations, which we all consider, in this room—or at least those out there and more of us up here—a safety feature for security.

As you know, many people are arguing, and the Senator from Illinois made reference to the social spending cuts that have gone on, about freezing across the board, to which the Secretary made reference, including defense expenditures. That argument is one we must face and we must determine the outcome of or you are going to lose your you know whats, and we are going to lose a great deal of security.

You cannot view security expenditures in the same manner in which we view domestic social programs, but that is the persuasion of the argument. It is much carried in the media.

As you said, Mr. Secretary, the security of the country is the first and foremost obligation of any government, including our own, and our expenditures in that regard should depend upon the threats, not upon political imagery, or even upon the possible political effectiveness or in achieving cuts across the board so that we can achieve responsible balance between the revenues and expenditures.

The Senator from Illinois, who has departed, mentioned the cuts in social programs over the past few years. I cannot see that there has been any cut on balance. There have been some cuts—I have been serving on Labor and Human Resources—in spots, but not overall. If we take a look at the past 20 years, we find that the total increase of our expenditures, if rated at 100, entailed social programs accounting for 89 on the scale of 100 of those increases, and defense for only 11.

I have asked the following question of the Secretary of Defense and the Secretary of the Army. I shall ask it of you, Mr. Secretary, and you, Admiral and General.

In spite of the increased defense appropriations over the past few years resulting in more and better hardware, better readiness, morale, and quality of life in all of our service, has the relativity of the threat increased or decreased? In other words, although we have gotten better—and some of Admiral Watkins' remarks might go against the thrust of what I am asking or expecting to get as an answer—in other words, although we have gotten better, has the threat that we face increased even faster than the improvements we have made?

I ask you first, Mr. Secretary.

NAVAL BALANCE

Secretary **LEHMAN**. Speaking only to the naval balance?

Senator **DENTON**. Not just to the naval balance, but to the degree that the naval service contributes to the overall security of the United States. That is the content of the question.

Secretary **LEHMAN**. It is my personal judgment that the relative weight of our naval contribution to national security, considering the growth of the threat, has improved over the last 4 years.

Senator **DENTON**. As far as the Navy is concerned, I grant you that. I am asking whether in terms of the total defense threat posed against the United States and its interests, its various incremental interests, has the totality of the threat increased or decreased?

Secretary **LEHMAN**. That is a subjective question which I answer with my own best judgment, and that is that the balance overall has improved. It has not gotten worse in the last 4 years.

Senator **DENTON**. Have we met the threat yet that Admiral Watkins talked about?

Secretary **LEHMAN**. No; I believe we are a long way from achieving true parity.

Senator **DENTON**. In other words, so the threat has diminished relative to what it was some years ago, but we are still a ways from having reached the balance that we must——

Secretary **LEHMAN**. When one looks at the 180 Soviet divisions, at the three times the tactical aircraft compared to ours, the rate of their modernization, the size of their manpower, and their nuclear first strike capability, I do not see how anyone can say that we have yet achieved parity.

Senator **DENTON**. Although I admire you, Mr. Secretary, and you, Admiral Watkins, and you, General Kelley, as you know, personally—and I must add to those who have expressed their admiration—I do wonder about something. We have threats now which are different in location and different in degree and different in manner than those which we had in the years past, the threats to which you compared the increase in numbers of U.S. Navy. Of course, we can remember, Admiral Watkins, when in about 1960 the total presence of the Soviets in the Mediterranean was two submarines. Now we have more Warsaw Pact presence there perhaps than NATO. I do not know. I would imagine that that is the case at times. That is a tremendous change in naval balance alone.

What I worry more about, in terms of the Navy's continued statements that we are getting better and better relative to the threat, is that we now have threats in other geographic areas of the world imposing tremendous logistics problems upon you.

I am familiar with the duplicity of the computers in the system that determine how well we can meet our commitments. They will tell you that, yes, you can get so many divisions and so many ships to a Central American crisis, but then what happens if you have simultaneous crises in the Middle East and other parts of the world?

I was involved when we were designing that system, and I pointed out that the emperor was not wearing any clothes in respect to the validity of the answers. I understand that the computers are still not telling us the exact answers. I believe it is our responsibility to the American public to consider that duplicity on the part of the computers, the inaccuracy of the answers. In other words, how do you view the possibility of conflict in Central America with a simultaneous outbreak in the Mid East? We used to talk about how hard it was to reinforce Europe. OK, you can do that job better, but as we look at the different political changes in the world, do you really believe that the Navy and the other services together have kept up with the threat, or has the threat gotten worse?

WORLDWIDE MILITARY THREAT

Secretary **Lehman**. I think the threat has definitely gotten much worse over the last 20 years. The ability to interdict our capability to resupply NATO or to operate in the Middle East, the growth of the military naval interdiction capability in Cuba, with the Florida straits being the key choke point that stands between resupply and 85 percent of the embarkation of Army tonnage, all of these things have made it a much more difficult military equation that we face. We have a long way to go to restore us to the kind of security we had 20 years ago.

Senator **Denton**. I will stress that answer for the record because I think that it is what the people on the floor of this body need to have emphasized to them, and on the floor of the other body as well, because we are in danger of a total misperception on that point.

I think I might be out of time, Mr. Chairman. If I am, I will wait for—I have 1 more minute?

For the record, for the Senator from Illinois and for the record of today, in John F. Kennedy's time, we were spending twice as much on defense as on social programs. We are spending half as much now on defense as on social programs, and I think that point should be made.

The last question I have to ask is because the Navy is as international affairs oriented as any service. I have asked this of the Secretary of Defense and the Secretary of the Army, and I got the expected answer.

Do you believe that there have been major costs to the domestic economy of the United States as a result of failed security policy during the past 15 to 20 years? The implication of that question is that just because you take $15 million out of Defense and give it to social programs, does that mean that you are going to be socially better off 2 years from now, or may you have sacrificed access to materials, raw materials, or have caused a political situation to develop somewhere that is going to cost you more in the domestic economy, net, and therefore give you less available for the general welfare in terms of social spending?

SECURITY POLICY AND THE DOMESTIC ECONOMY

Secretary **Lehman**. I think there are two parts to that answer. First, I think we have paid a price, a very heavy price over the period you describe, the last 15 years, in our economy because of the declining perception around the world that the United States was a reliable partner and a secure investment for the future. I think the strength of the dollar today in contrast to the constant decline during the period you outlined, prior to these last 4 years, was a clear indication that trading partners, investors and oil sources were hedging their bets with regard to the American economy. They did not believe that the United States was any longer as reliable and secure an ally as in the past. I think we still have deep indirect costs from that today.

Second, I think that the defense expenditure is one of the most productive stimulants in job production, in real stimulation of industry and enterprise in the Silicon Valley, and in heavy industry of every kind because of government spending. It has been no small part of the economic recovery of the last 4 years.

Senator DENTON. I thank you, Mr. Chairman.

Chairman GOLDWATER. Senator Humphrey.

Senator HUMPHREY. Thank you, Mr. Chairman.

Perhaps someone has asked the question already, but Mr. Secretary, with respect to the characterization of the Navy some years ago as being one-half of a navy, or how was it, one-half ocean navy in a three-ocean world, is that how it was put? How do you characterize it today in those same terms?

SIZE OF THE NAVY

Secretary LEHMAN. I would say that we are, perhaps, at a two-and-a-quarter-ocean navy for a three-ocean commitment, and that we will be at the three-ocean capability by 1989.

Senator HUMPHREY. Well, that is certainly good progress.

One of the recommendations in the President's budget, as you know, is to reduce the student loan program by a third or a quarter—I guess it is a quarter—and that has already led to a lot of squawking by the education establishment, by students, all of which is understandable. It has always seemed to me that we are approaching these programs in a rather unenlightened fashion, and the reason I am raising it in the contest of your testimony this morning is that you mentioned earlier that the universe from which you will draw your recruits in future years will be shrinking for demographic reasons, and it just seems to me—I just want to offer a suggestion, that when you folks, Secretaries, Service Secretaries and Secretary of Defense, get together, that you begin to urge the administration in future years to look at requiring some military service for those who are physically qualified from those who seek educational benefits.

Someone put it well when they said we have today a GI bill without GI's, and that might be an answer to both problems; namely, to increase the universe from which you can draw high quality accessions and at the same time provide a means to our young people who cannot otherwise afford it to advance their education.

What do you think of the idea, and is that being talked about at all today?

Secretary LEHMAN. We have instituted a program called the Sea, Air, Mariner [SAM] program in the Navy. The Marine Corps has had a similar program for some time and is expanding it now. It is targeted precisely to that concern. We are actively recruiting in the high schools. We are asking for 10,000 a year. We filled our quota last year for the first year of the program. We are asking for another 10,000 this year, to target the college-bound kids and offer them a 6- to 10-month enlistment, to go through boot camp and A school, to get their skill, and to be assigned directly to a reserve unit. They delay a year going to college, earn money while they are going through training, and then are assigned to a reserve unit directly, to drill with a 6-year obligation.

Many of these people we use, not just for 2 weeks active duty, but we give them a whole summer job, flying in P-3's and maintaining frigates, and ship intermediate maintenance activity, and so forth. It is a very promising program. We are bringing a lot of very high-quality, college-bound kids who will become a permanent part of the Naval Reserve total force. I think the more we can go in that direction, the better.

The Commandant and CNO are both initiating smaller programs with the same approach to direct reserve officer commissioning this year. That will be an added attraction, upward mobility within the reserves.

Senator **Humphrey**. Well, that sounds like a fine program, but what I am getting at is a complete restructuring of our educational programs, our assistance programs to students. I mean, I think it is just bad training for our youth to suggest they can get something for nothing from government. They want student assistance—I am talking about—small programs like your SAM program, as excellent as that is, I am talking about a complete restructuring of our philosophy, and I am urging that the service secretaries begin promoting this idea to solve two problems; namely, the shrinking pool, and second, how to aid deserving youngsters, to suggest that they owe their country several years of service in any case, but especially if they want something for nothing, they need to earn it. That is the way we ought to be training our young people, it seems to me, and I think we can kill two birds with one stone.

And I just want to urge you folks behind the scenes to begin lobbying in that direction, if you agree with it, so that we have a policy initiative from the White House sometime in the next year or two to convert our educational assistance programs into, well, call it a GI bill, call it anything you like, but let's require some service of our youngsters if they want the taxpayers to fork over substantial costs for education.

QUALITY OF RECRUITS

Admiral **Watkins**. Senator Humphrey, if I could add one note. In the last decade when we were asked to bring in Project 100,000, people from the economically deprived areas in the country and so forth, to fill up the numbers, we did that, and we had serious problems as a result, not because of the kids but because of our inability to deal with the cultural-change problem.

We were forced at that time to build our own educational system within the Navy, for example, and we did that. Congress would not allow such a system in prior years. But we have now built in remedial reading, and remedial mathematics courses. We put thousands and thousands of young recruits, who hold high school diplomas, into these courses so they can read our technical manuals at about the ninth reading grade level. And these are sailors with high school diplomas. That problem is the thing that has to be solved in this country, to build up the base. When I said the qualified and available male pool, the word "qualified" is key to an understanding of the problem. That means that he or she is intellectually and physically qualified to come into the Navy.

Now, we can fix the "qualified" pool that has been declining in this Nation; and if we raise that, then we can fill the bins of the Navy quality and quantity needs very easily. We are spending large dollars each year that Congress authorizes for these needed corrective courses that simply should not have to be required in this Nation. We should not have to reeducate in the military services. But we have been forced to do it. In fact, we are going to have to expand this reeducation effort in the years to come as we try to reach into that pool of unqualified males and qualify more to come in and serve in uniform. That entire issue needs to be looked at. I agree with you 100 percent.

In fact, I have a very significant study, called Manpower and National Security, or Education and National Security going on in the Navy in order to make an impact and hopefully influence national education. Because the Navy is the highest technology branch of Defense, there is no question that we are going to have to deal with the educational issue one way or the other to keep the all-volunteer concept alive.

There will have to be educational initiatives to look toward the future and to get the educated base of youth on track so that not only the services but the Nation can generate enough young technical types desperately needed by this Nation in this age of exploding technology.

STUDENT LOAN PROGRAMS

Secretary LEHMAN. Also, to add one last thing to your specific point, it is a great idea. The three service secretaries——

Senator HUMPHREY. Will you promote it?

Secretary LEHMAN. The three service secretaries, 3 years ago, went on record to OMB recommending that all student loan programs have a veteran's preference. Somehow, I guess that did not get through Mr. Stockman, but, I think it is a very good idea to put in.

Senator HUMPHREY. I think it is an excellent idea, and hope that you can find the time to pursue it more energetically than perhaps it has been pursued in the past. I think it is an awfully good idea, and the sooner we do it, the better.

Do I have time left?

What will be the effect on the Navy, Mr. Secretary, if the President's defense request is significantly reduced, assuming that the Navy's proportion remains the same?

REDUCTION IN PRESIDENT'S DEFENSE REQUEST

Secretary **Lehman**. What will happen will be a reversion to the very inefficient procurement practices of the 1970's which were caused by the very same thing.

Senator **Humphrey**. Can you be more explicit and give some examples of what would happen?

Secretary **Lehman**. Yes. Already, we have had to reduce the F-14 production from 24 to 18 to get under the President's cuts in the post-Rose Garden deal. That has raised the price of each F-14 almost $3 million a copy. We will see much more of the same because we cannot cancel the F-14 line. We will have to do that to all of the production lines.

Senator **Humphrey**. So you are saying that the economies in this case are false, that while you perhaps appear to be saving money in the short run, in the long run it is going to cost more.

BUDGET CUTS

Secretary **Lehman**. It is exactly the reverse of the benefits I talked about at the beginning. I think we have doubled our naval capability with only 7-percent real growth increase because of the benefits of higher production rates, competition, second sourcing, et cetera. When you start downhill, you get the reverse leverage. You have far more than a 5-percent real cut in capability by a 5-percent real cut in budget because it is taken in ways that drive out second sources, competition, and effective production rates.

Senator **Humphrey**. Well, you seem to be saying that if the Navy takes cuts as a part of overall DOD reductions, that it will—are you suggesting that it will affect procurement mostly or what?

Secretary **Lehman**. Yes, because we will absolutely go to the mat to hold safe the personnel benefits. We will give up production rather than personnel.

Senator **Humphrey**. What about O&M?

Secretary **Lehman**. O&M will have to take cuts as well, and you get the same inefficiencies, the same stretchout of spare part buys, the same backlog of overhauls that we saw in the 1970's.

Senator **Humphrey**. Thank you.

Chairman **Goldwater**. Mr. Secretary, alternatives to the big deck carrier. In your posture statement you point out that there are no aircraft carriers in the 1986 budget and that no new construction carriers will be required until the early 1990's.

Now, this seems to presume that the carriers which will retire during the first decade of the 21st century will automatically be replaced by more big carriers. Of course, that may well prove to be the most cost effective scheme. On the other hand, the need to replace seven retiring carriers in 10 years raises serious questions of affordability.

First, do you have a plan to examine alternative ways to replace those retiring ships?

AIRCRAFT CARRIERS

Secretary **Lehman**. Well, you can be sure if I am still in this job in the early 1990's that I will be presenting a full restudy of the big carrier versus little carrier issue. I like little carriers, but they are a lot more expensive to deploy for the same air capability than big carriers for the same reason supertankers have put handy sized tankers out of business.

But, I do not agree that that is such an expensive proposition. The carriers make up only 2 percent of our shipbuilding program, and our carriers are built for a 50-year life now. It is one of the best investments that we have in the Defense budget. They will be replaced in a phased way, and everything I have seen so far tells me that the *Nimitz* class carrier is still the way to go, obviously, updated with the latest technology. We know how to build it and the laws of physics have not changed. Big carriers have seven layers of armor against the cruise missile threat. They have multiple hulls, triple armored decks and all the survivability that a big ship can give you to take hits, which any ship will take in war, and survive.

So going to little ships as, for instance, the Brits had in the Falklands, is certainly an option, but it is an expensive option and it is a much more vulnerable option.

Chairman GOLDWATER. I agree with all of that. But my question was relative to any plan that you might have to examine for alternative ways to replace those retiring ships whether you are here in the 1990's or not. If we have to wait until the Secretary of the Navy comes in, in the 1990's, it will be too late.

Secretary LEHMAN. Well, we have done several major studies on alternative carrier proposals, beginning back in 1976. We updated it again in 1982, and we sent copies up here to the committee. Those studies looked at every single different design that was conceivable. They came down strongly on the *Nimitz* as being the most cost-effective way to put survivable air power to sea, and in my own judgment, having continued to monitor all the available technology, that is still the best way to go. My prediction is that no matter who is the Secretary of the Navy in 1991, when we come up for long lead money, that he will be asking you for long lead for an updated *Nimitz*.

Chairman GOLDWATER. I think that pretty much answered my second question.

You are, then, continuing to do research and development to ensure that necessary technologies are available to support those alternatives when we might need them?

NEW SHIP TECHNOLOGIES

Secretary LEHMAN. Yes. We are presenting in this budget the new MSH ships that were first authorized in fiscal year 1984. These are revolutionary SES, surface effects ship, hull forms. We have the PHM hydrofoil for our PG force, the six PHM's, and we are also looking at SWATH-type [small waterplane area twin hull] hull forms. None of them look terribly promising for scaling up to very large ships because you lose the advantage that you have in the hull-borne capability. But we are continuing to pursue technology across the board.

Chairman **Goldwater**. Well, I have flown that hydrofoil, and I think it is a great bird, but I do believe that there is a limit to which you can go.

Now, if this answer has to be classified, tell me, and we will not even require it. It is on strategy.

I believe I am safe in assuming that your forward maritime strategy is predicated on the assumption that the Soviets will gather their naval forces, particularly their submarine forces, in the northern waters, the northern Atlantic waters.

Now, how confident are you that they will not preempt this strategy, if that is what it is, by moving their submarine forces into the Atlantic and Pacific weeks before any possible D-day?

Secretary **Lehman**. I think the CNO ought to answer that question.

NAVAL STRATEGY

Admiral **Watkins**. It is very difficult, Mr. Chairman, to go very far into this without getting into classified information.

Chairman **Goldwater**. Well, let's quit talking about it then.

Admiral **Watkins**. I think I can say this, though, Mr. Chairman, that we do not have a Maginot line strategy that looks at one option. We are ready to deal with what we would call the leakage of Soviet forces southward in the North Atlantic. Frankly, that is somewhat simpler in some ways for us to handle rather than in their own backyard where they have heavy and massive air cover and the like. We are ready to go both ways, but we can match their strategy as it changes. We have built a navy based on a range of options that does not require a single strategy to be carried out. We are ready to deal with that kind of problem.

In fact, the Soviets themselves talk about a 1,500-kilometer strategy, and a 2,000-kilometer strategy. As they continue to build 14 different classes of nuclear submarines, in fact, as they continue to build and then flow these large forces, they cannot confine them to the Arctic alone. They are going to have to flow them out to the far reaches of their empire.

For example, we have seen the new base at Cam Ranh Bay, with its 38 different kinds of tactical and reconnaissance aircraft, several submarines, 10 combatants, and 10 auxiliaries. It is the largest and the only real forward depot they have. You will see the Soviets begin to flow their forces out to this and other forward deployed sites so that they can then bring to bear the political leverage they are seeking around the world.

We will definitely see them flow their new forces southward. Our strategy and our weapons systems, everything we are doing, are built to be ready to counter that outflow as their forces continue to build in size and reach.

Chairman **Goldwater**. Sometime I would like to sit down and talk with you about that. I have seen a little bit of the other side, too.

That is all I have right now. Sam, you are next.

Senator **Nunn**. Thank you, Mr. Chairman.

Admiral Watkins, last year I asked you the question, How much real growth was required in order to sustain the Navy's modernization and expansion plans, and I think the record reveals that you indicated 12.7 percent was needed in fiscal year 1985 and 9.2 percent in 1986. Last year you received something closer to 4 percent, and this year it is doubtful, based on all the comments I hear, that you will get that much.

So my question is, given what you got last year and assuming you get around 3 percent this year, What does that do to the Navy's modernization and expansion program? Is it still on course?

NAVY MODERNIZATION

Admiral WATKINS. It is still on course, Senator Nunn. We talked earlier about procurement stretchout and that sort of thing. Of course, we can continue to stretch out achievement of the capability, for example, to lift 1½ Marine divisions. We would like to have achieved this capability in 1989. But we are not going to achieve it now until 1994 because of stretchout. There are costs connected with that. Also, real growth indicators change, indices change. We are required to come forward with a budget on specific DOD indices and, those can make a marked change in the real growth factors which heavily influenced projections.

In addition to that, we have had very significant management improvements that have been discussed by the Secretary where over a couple of billion dollars in ship cost adjustment lines alone, for example, have been given back to Congress. That is how we were allowed to procure *Missouri* early, one year early, since the Congress reallocated dollars saved in order to bring the *Missouri* back on line within funds budgeted for Defense. We have done many more things to improve our budget projections. In fact, we were accused within the Department of Defense of not coming in with realistic budget figures. They said we were coming in too low. In fact, we have actually done better than even our own past budget projections.

Those kinds of aggressive management actions have changed our ability to achieve objectives within budgeted figures. And my feeling is that if we continue to show those kinds of improvements hopefully the Congress will feel that we are credible witnesses up here, giving you the best budget and best "bang for the buck" we can. The 4.5-percent real growth budget by the current indices and the results of our last year's experience in contracting are going to be adequate to keep the current positive momentum going. We think that 4.5 percent is a very fair real growth for reaching the 600-ship Navy that we all desire.

Senator NUNN. What real growth? I missed the real growth figure you used.

REAL GROWTH

Admiral WATKINS. Four and a half percent is the 1985-86 requested budget growth in this year's presidential budget.

Senator NUNN. For the Navy?

Admiral WATKINS. For the Navy, yes, sir.

Senator NUNN. That is everything?

Admiral WATKINS. That is everything. That is the figure for the Department of the Navy.

Senator NUNN. What is your 1987 figure? Do you remember? Maybe you could furnish that for the record, 1987 and 1988.

Admiral WATKINS. We can furnish it for the record. We do not have that calculated yet, Senator Nunn. We just received the Department of Defense indices for the outyears, and we simply have not calculated the outyear projections yet. We will do that and provide it for the record.

Senator NUNN. Thank you.

[The information follows:]

REAL PROGRAM GROWTH, FISCAL YEARS 1987, 1988

The fiscal year 1987 real growth amount for the Department of the Navy is not available because the DOD totals for fiscal year 1987 and fiscal year 1988 have not yet been allocated to the Military Departments. However, the total Defense projection of 8.2 percent and 8.8 percent for fiscal year 1987 and fiscal year 1988 respectively will be sufficient to permit us to carry out our planned programs.

Senator NUNN. General Kelley, we talked last year I think when all the Chiefs were before us about whether the Chiefs had taken a look at a 5-year plan with different resource projections than what the administration is now requesting. At that time the response was you had not done that, but you were beginning to do that. I think I later heard from, I am not sure whether it was the chairman or someone else, that that was being done.

Have the Joint Chiefs now projected the effect of a different spending profile over the next 5 years on your current plans?

General KELLEY. I do not think we have looked at options. We do have the 5-year program. I thought you were going to ask me the same question that you asked Admiral Watkins. That is why I was all geared up to tell you that if you were going to offer me 3 percent positive growth, I was going to take it because we are going in with a budget that has a 2.4 percent green dollar negative growth.

Senator NUNN. The Marines themselves have——

General KELLEY. But that is an anomaly of the system because last year we bought out a lot of our equipment.

We have a 5-year program, Senator Nunn. We have not looked at any options to that because I think we have got a very solid 5-year program and, I think as you know, Commanders-in-Chief now are major players whereas they were not so major before. They come in twice a year and actually sit down with the Secretary of Defense to lay out their requirements. We balance our requirements in the development of our 5-year program.

Senator NUNN. Well, I just wondered if the Chiefs had underway anything like a projection of what would happen if you fence off the projected program on strategic defense initiatives.

FENCING PROGRAMS

Admiral WATKINS. We have not done that, Senator Nunn, as I think it is one of the most dangerous games in town to play, sir. Every time we have ever been involved in that kind of "what-if" game, we see it published within a day or two in the newspaper suggesting that we are proposing some kind of cuts. We come in here to your committee with the very best budget we can build to do the job against the threats we face worldwide. We recognize there are going to be other problems which the Congress must face.

We do not like to go through "what-if" drills unless we have clear signals that this is the way it is going to be and if we have been given Presidential direction to take a look at budget submission alternatives.

We are always ready to look at alternatives when required, and in fairly short order. After all, we just built the budget and know what the program priorities are. We can provide program alternatives very quickly. But it is not the kind of drill we like to go through, certainly at the outset of the budget submission period.

Senator NUNN. Well, what kind of clear signals would be required from the Congress to get you to do that? Because, it seems to me that that is a very relevant question now.

I do not know, maybe I am wrong. I have not heard anybody in this Congress that I have talked to say that we are going to get more than 3 percent real growth average over the next 5 years. I do not think anybody believes that can be done with the deficits we have right now.

I hope it can be, but I do not know of anybody that believes that. Maybe some of my colleagues believe we are going to get more than that, but I have not heard anybody say that.

So what kind of signals would be required by the Congress? Would we need to pass a law saying that you shall draw up a budget and give us the implications of that? Because I think it is high time we get down to some reality in this situation. If we keep having 5-year plans based on resources that are not going to be there, it seems to me that is the ultimate in obscuring priorities and in probably making the wrong decisions.

So I am asking, Admiral, what kind of signals would you deem sufficient from the Congress? I assume you respond both to the Congress and to the Executive.

BUDGET PROCESS

Admiral WATKINS. Following the normal budget process, Senator Nunn, that we have followed for years, very seldom have we come in with a budget that has been appropriated at the requested level. So, we will go through the same process we have gone through for years, working with your committees, working with the members, trying to justify what we have, perhaps taking advantage of contractual improvements and savings and that sort of thing which the Congress is very interested in, and we will work it out as we always have.

Senator NUNN. Well, you never have worked it this way. The question I am asking is, I saw in the paper this morning that Senator Domenici, chairman of the Budget Committee, was talking about a statute that would impose 3 percent. I have not talked to him about that. That is just from the newspaper, but I am asking what kind of signal would you require from Congress to basically go back to the drawing boards on your programmatic projections?

Admiral WATKINS. When the Secretary of Defense, Senator Nunn, tells us to go back and relook at figures.

Senator NUNN. Well, the answer, then, is that no signal is going to be sufficient from the Congress unless it is given by the Secretary of Defense, is that right?

Admiral WATKINS. Well, I think that is right, sir, because we have to deal with the administration, with the budget process. We will do that at the right time, and we are ready to move quickly if we are asked.

Senator NUNN. I assume if we passed a law, you would do it.

Admiral WATKINS. Yes, sir; we always comply with the law, or at least by policy we do.

Senator NUNN. Well, does that mean that we then have to put something in a rigid statute to get that kind of planning from the Joint Chiefs?

That is what the answer indicates to me, because the Secretary of Defense, we know what his answer is going to be.

Admiral WATKINS. We will provide the Secretary of Defense with the range of options when he asks us to, Senator Nunn. We understand your questions and concerns very well.

Senator NUNN. Well, I just think we are about to do some grave and perhaps irreparable damage to the national security over the last 5 years the way the forces are converging now politically and what is happening in the Defense Department because you have got a program that simply does not fit anybody's definition of the resources that are going to be available, and I see that priorities are going to be obscured. I think that particularly if you fence the nuclear area and if you fence the strategic defense initiative which is growing well over 100 percent this year, I understand, I just do not see what—I see the implications to conventional forces as being very, very detrimental, and to those people like General Kelley who are required to fight with conventional forces, it seems to me that that question has got to be addressed

I understand the respect for Secretary of Defense that you have, but I am just saying that it seems to me Congress has an obligation here to find the kind of mechanism you would respond to and then to begin to act on that if Congress indeed is going to move in this direction toward the way I have projected it.

General Kelley, do you want to make any comment on that?

General KELLEY. No, but based on your scenario, Senator Nunn, if you fenced strategic, and if—those are ifs—if you fenced strategic defense initiatives and you then limited the Department of Defense to a 3-percent real program growth per year for the next 5 years, you would have some pretty damaging effects on conventional forces.

Senator NUNN. That is what I think, too. I agree with that.

Admiral Watkins, do you agree with that generally?

Admiral WATKINS. Absolutely. I agree 100 percent.

Chairman GOLDWATER. OK.

Senator Warner.

Senator WARNER. Thank you, Mr. Chairman.

Mr. Chairman, when the Secretary of Defense was here, I said flatly that the 3-percent figure was a target toward which this Senator has been working. In view of the fact that so many of our colleagues want a freeze, I think we have got to take the initiative and drive in for the 3-percent figure, so she stands there like a stone wall.

Chairman GOLDWATER. If the Senator would yield, we have discussed 4 percent in staff work, so we are not far off.

Senator **Warner**. Mr. Chairman, you and I have talked about the 3-percent figure over the past 6 weeks, and I recognize the chairman's desire to get the highest amount, and I commend the chairman for that. You have fought a courageous battle here behind the closed doors in our caucuses and elsewhere in this building. But I think realistically, the sooner we come to that figure—and I predict it will be 3 percent, as did Senator Nunn—then the sooner we can stop the Department of Defense being the whipping boy in this budget process and we can get on with our business.

Likewise, the 3-percent again aligns the United States with its NATO allies. Nine out of that group have met the 3-percent real growth figure, and that is where we have got to drive the stake and work with them.

SHIP OVERHAULS

Turning to the subject of ship overhauls, Mr. Secretary, recent legislation concerning the expanded use of the coastwide solicitations for regular overhauls has increased the incidence of what we call lowballing, that is, underbidding the cost of an overhaul. That underbidding is being done by the smaller shipyards, not the well-known ones, and our records indicate you are getting some unsatisfactory performance.

Now, what are you going to do to try and shore up this leaky, inefficient and wasteful practice?

Secretary **Lehman**. Well, overhauls have proven to be the most difficult and complex part of my management task in the Department of the Navy. They are very difficult to contract on a fixed price basis because so much depends upon open and inspect work. You do not know how bad it is until you actually get the turbines open and so forth.

What we are doing—and it has taken us 4 years of arduous labor to move to this point—first, we have moved up the percentage of coastwide bidding to get competition. Now, as you may have read in the papers with the fuss on the west coast bidding, we have stopped all bidding until we have done sufficient work to get a base package on existing ship types. When we have a good data package on the firm, fixed price part of the overhaul, we can award that part of the overhaul to qualified bidders based on low price, firm, fixed price.

That still does not eliminate the danger of buy-in on the other parts, the ship faults for which it is impossible to do firm, fixed price bidding accurately, but, at least it takes a significant part of the package and adds the discipline of firm, fixed price contracting. That is what we are doing now.

It is tough. It requires a lot of analytical work and engineering work.

Senator **Warner**. Are you prepared to deny future contracts to those yards which have performed unsatisfactory work?

Secretary **Lehman**. Absolutely, but of course, we are not always free agents in this because Congress, in its approach to small business and other parts of the overhaul program, does not give us a free hand in how we work.

Senator **Warner**. We favor the competition. You have done your bet, but the record shows that some of these yards are not qualified, and you are paying the price. Then the sailors are faced with dealing with ships which are improperly repaired.

Secretary **Lehman**. Absolutely.

E-6A AIRCRAFT

Senator **Warner**. Let's turn now to the E-6A. I am very strong on this point because as we look at the Trident program, in my judgment, that aircraft is essential to get the full operating radius of this new Trident program. Therefore, Admiral, I turn to you now and ask you, what is your view with respect to the E-6A and your priority?

Admiral **Watkins**. Well, I will not change my testimony from last year, Senator Warner.

My feeling is that the Trident submarine and D-5 missile will blossom at the end of this decade and be exposed as the most——

Senator **Warner**. Survivable.

Admiral **Watkins** [continuing]. Valuable tool——

Senator **Warner**. Correct.

Admiral **Watkins** [continuing]. Of the then President who will have a variety of options he does not have today, and that includes the hardening of the command and control system that the President has embarked on. In fact, it is the highest priority in national defense, and it is being achieved through——

Senator **Warner**. Then I come back to the direct question. Do you not believe that the E-6A is an essential part of that Trident program? We should move forward with that now and not try and stretch the legs on the EC-130?

Admiral **Watkins**. It is my personal opinion that this is the case, Senator Warner.

Senator **Warner**. How about your professional opinion?

Admiral **Watkins**. I have seen a study and I recognize the issues. There have been some unsolicited proposals that have come to our attention on stretching the EC-130 at fairly reasonable and fair costs.

Now, you can debate the efficacy of so doing back and forth, and it has been. It has been looked at thoroughly by the Joint Chiefs of Staff. The Joint Chiefs of Staff position was that we should not jeopardize the potential for the expensive and vital D-5 missile system in the future by trying to look at only cost effectiveness for an EC-130 stretch. We need to look at the total sea-based system in balance. We felt that over the lifetime costs of either system could be shown to be nearly awash. Therefore, we felt the E-6A was the right way to go from a system effectiveness standpoint.

I think the Secretary of the Navy has felt for some time that it is probably more cost effective to go with an EC-130 stretch. In fact, his recent independent study demonstrates that there is potential there.

It was a judgment call, and my personal call was that the E-6 was essential for the future D-5 employment in order to give the National Command Authority maximum options for survivability of the communication link to those important D-5 submarines.

Senator WARNER. And to fully utilize the capabilities that the Trident provides.

Admiral WATKINS. Yes, sir; that is my personal opinion.

Senator WARNER. How about your professional opinion? Your personal opinion is fine, but how about your professional opinions?

Admiral WATKINS. The professional is the same. My personal opinion is my professional opinion.

Senator WARNER. Thank you, Admiral.

Last question to the Commandant and the CNO. All services are now coming up and in a very realistic way facing up to this issue of chemical warfare.

General Kelley, your troops have to go all over the world, not just the NATO arena where some progress is now being made. You are also, I think, severely subjected to threats from terrorist organizations and otherwise that could employ chemical initiatives.

Is the Marine Corps strongly behind the binary program?

General KELLEY. We are indeed, sir. There are two ways to approach countering the chemical capability of a potential adversary. First of all, there is the passive method of protective equipment. The other is the deterrent method; however, this country does not have a sufficient deterrent at this particular time. I am strongly behind the binary program.

Senator WILSON. Is the Navy, Admiral Watkins, likewise?

CHEMICAL WARFARE

Admiral WATKINS. We agree. As you know, we have virtually completed the research and development on the Bigeye, which is the binary system. It is essentially ready for production and transfer to the Army. It was a congressional decision last year not to go with it. As members of the Joint Chiefs of Staff, we think that was a mistake.

We see the proliferation of potential for use of chemical weapons worldwide, not only by the Soviet Union but their surrogates. In fact they are using them now. And it would put us in a devastating position on the forward edge of the battle line for the Army, and the Marines when they are landing, not to have some chemical warfare deterrent. Again, such a deficiency would put our forces in jeopardy, and the simple answer of nuclear retaliation as the counter does not seem like a viable alternative.

Senator WARNER. Thank you.

Thank you, Mr. Chairman.

Chairman GOLDWATER. Senator Wilson.

Senator NUNN. Would the Senator yield for about 5 seconds? Just a brief comment.

Senator WILSON. Of course.

Senator NUNN. Unaccustomed as I am to defending the Secretary of the Navy's right to also respond to questions, because it is usually unnecessary, I think we ought to get an answer for the record on the tradeoff between the EC-130 and E-6.

Senator WARNER. He ducked it the first time we went around. Maybe you can try again.

Senator NUNN. I just think—he is usually shy and bashful, I know. I do not need it right now, I think for the record, because I agree with the Admiral, it is a pretty close call here.

E-6A

Secretary LEHMAN. My position has been that at the current level of the Navy budget, I think it is worth flipping the coin and going with the E-6A. If we went below the current level the E-6 would be my first procurement offering on the block.

Senator NUNN. In other words, if you went with Senator Warner's 3-percent budget, then that would be the first thing you would drop; is that right?

NATIONAL DEBT

Secretary LEHMAN. I am sure that will never get as low as 3 percent.

But Senator, if I could, the chairman asked me to ponder your insertion for the record on the national debt, and I pondered it, and I would like to insert just an addendum to your numbers which are eminently correct, except that you left out that in the 30 years from 1946, the figure you cited, which would be 9 percent, the debt grew to $467 billion, according to CBO figures. Then from 1976 to 1979, that World War II segment grew by 6.3 percent to $561 billion, and between 1979 and 1982, grew at a rate of 12.1 percent, which is the average T-bill rate, until it reached approximately half of the debt in being, $766 billion, half of $1.495 trillion, which is about where it is today.

Senator NUNN. You are saying the interest paid on it and the accumulated interest——

Secretary LEHMAN. The compounding which was never paid, the debt accumulated so that the best estimates are that the World War II portion makes up for half of the debt today.

Senator NUNN. It would be interesting to take those compounding figures on from 1980 to 1985 and see what that is going to be compounded over the next 20 years, and then compare those two.

Chairman GOLDWATER. Could I suggest that you two guys get together and work this out? [Laughter.]

Senator WILSON. Thank you, Mr. Chairman. I was finding it fascinating, but it seemed that it was more than a brief interval.

Senator NUNN. Could I just insert three——

Senator WILSON. No, no, Senator. [Laughter.]

Senator NUNN. Three other questions for the record on production rate, Mr. Secretary, if you would answer those.

Senator WILSON. Mr. Chairman, before I begin my questioning, I would like to make an observation. I think the members of this committee, if they feel that a 3-percent real growth is going to result in imprudent cuts, have a duty to our constituents, and that duty clearly is to explain to the balance of our colleagues what the impact of those cuts will be.

I note with interest and perhaps undue optimism that my colleague Senator Stevens, the chairman of the Defense Appropriations Subcommittee, has indicated some greater optimism. He thinks we can get 5 percent real growth over the next 5 years. But

I am very much concerned that all this talk about 3 percent can be a self-fulfilling prophecy and that we are setting a ceiling rather than a floor, and I would urge my colleagues to be very careful about doing that.

Chairman GOLDWATER. If the Senator would yield for just a minute, we have explored this. It has not met with any acceptance at all from the Republican leadership. I go above you. I am after 5.8 percent.

Senator WILSON. Well, that is fine.

I think this morning we have heard admonitions based on an assumption that I do not think should yet be an assumption.

Chairman GOLDWATER. Well, I can tell you that the leadership of our party will not listen to assumptions. They will not even listen to what we have offered.

Senator NUNN. Speaking for my part, Senator Wilson, I have not taken a position on this. I am waiting for a Republican consensus.

Senator WILSON. I think that is a wise position. I will only ask, Senator, that you be prepared to accept it once it is available.

Senator NUNN. I will examine it.

Chairman GOLDWATER. I think I know their strategy: Let us cut the budget, then they are going to come along and save the country.

Senator WILSON. I think you are close.

Senator NUNN. That would be a turnabout.

Senator WILSON. Let me just ask a series of questions, and those that we have time for I would appreciate your responding to, but I want to pursue the line of questioning that I began last time with Admiral Watkins. I would like to have a response for the record as to what the relationship is between operations tempo and end strength. If I understood your prior response, you said that the increase in the number of ships which you had expected to reduce operations tempo has failed to do so, and I gather that the reason for that is that you have been given increased requirements by the National Security Council.

OPTEMPO

Admiral WATKINS. Yes, sir; the National Command Authority has been responding to a whole range of worldwide crises, as you know, including the Red Sea mining operation and the like, and these have been very demanding on our people, albeit ready and proud to do this. All they ask is that we be sensitive to their needs and try to relax when we can and get the optempo back down to at least the peak of what it was in Vietnam. At present, we are operating at about 15 percent higher than we were at the peak of Vietnam. Of course, we want to serve the Nation well. We are the first line of deterrence, the Navy and Marine Corps. We have been the first line in 85 percent of the cases since the end of World War II. We expect to be employed that way. But we want all to be sensitive to the needs of our people.

END STRENGTH

End strength becomes important in relation to optempo in the long haul. As I mentioned, if you jeopardize the future by not giving us the end strength to help build the base of potential petty officers, we will revert to an inward spiral of finding only a few Chiefs and lots of Indians, with nobody in the middle to do the training, resulting in discouragement on the part of senior petty officers who will then elect to leave despite their natural desire to stay in.

Senator WILSON. I understand that, Admiral. What I am really getting at, though, is some guidance to the committee in a precise, numerical statement of the relationship between optempo and end strength because I am concerned that we are facing a potential end strength that the budget may not support.

And to you, Mr. Secretary, I would address the question, what are the consequences, both cost and otherwise, of having to tie up ships when we do not have a level of manning adequate to operate them.

MANNING THE 600-SHIP NAVY

Secretary LEHMAN. That is a very, very important point. It is what happened to us in the 1970's when much too much of a burden was laid on too few people. If we do get an end strength cut, no one has suggested that we are going to give up our commitment to meeting the DPQ [defense planning questionnaire] in NATO; no one has suggested that we are not going to continue to deploy in the Indian Ocean. We are going to continue those commitments. And, it will fall more heavily on the sailors who are left, and we will go back to increasing instead of decreasing family separation, which is our biggest retention problem. End strength cuts will make it worse.

And so end strength is the worst place to go for getting budget cuts, next to cutting pay.

Senator WILSON. On that point relating to the problem that you have with respect to ship to shore rotation, is there the same role for civilianization with respect to the Navy that General Wickham has been optimistic about with regard to the Army?

MERCHANT MARINE MANNING

Secretary LEHMAN. This has been a major Navy initiative for two reasons: first, for the normal benefits of civilianization in a period of difficult end strength; and second, to try to do what we can, as fast as we can, to salvage the merchant marine industry in this country. We have put out for contract manning 51 ships, more than all the ships put out for contract manning since World War II; 51 additional ships. It is working out very well.

We are getting very good performance from the merchant mariners. We have some difficulties but we have found the unions to be very much more responsive and reasonable about no strike clauses. We find that we are coming in below the cost of civil service or military manning.

Senator WILSON. So we are talking about merchant mariners manning Navy ships.

Secretary LEHMAN. Manning MSLF ships, the support ships that in prior years have been manned by sailors and then by civil servants, are now contracted out to shipping companies and union mariners.

Senator WILSON. And this is resulting in cost savings?

Secretary LEHMAN. Yes, very definitely, and it has given a whole new infusion of jobs to the merchant marine unions. It is an initiative we are going to continue to pursue.

Senator WILSON. What role is there for Reserves, again in the context of this particular ship to shore rotation problem that you have as a result of the extended deployments?

Secretary LEHMAN. A lot of exciting things that have been done in the Navy on the use of Reserves to ease active duty requirements. As you will look at the numbers we have in this year's budget compared to what we were asking for 4 years ago to man the 600-ship Navy, they are considerably lower now because we have been able to find ways to use the Reserves.

We have copied a lot from the Air Force, which I think has led the way in utilization of the Reserves in many respects. Half of the MAC flights, for instance, are flown by reservists. Now a third of our P-3 fleet squadrons are manned by reservists. We sent over 300 reservists on temporary active duty to help man the battleship off Beirut to allow the sailors to come back for 3 week shore rotations. We have now moved nearly 40 ships, of the 600-ship Navy to the Reserve. These ships will be manned by Reservists, which has eased the requirement for active end strength.

In addition, last year we dropped one whole active duty air wing from the active force structure, and modernized the two Reserve air wings. We designated the first Reserve carrier air wing to man the 15th carrier. The other Reserve air wing will man the SLEP carrier in time of war.

There are a lot of other initiatives that the CNO and I have outlined in our posture statements that have saved us a lot of end strength and are going to save more in the future.

Senator WILSON. Let me just conclude with this question. Notwithstanding all of the efforts that you are making, what contingency planning have you done if the requirements for adequate manning of the 600-ship Navy simply cannot be met because of budgetary constraints?

MANNING THE 600-SHIP NAVY

Secretary LEHMAN. Well, if we do not have adequate manning, we are going to seek a reduction in commitments. We simply cannot pretend to do more with less. If we have fewer ships manned, then we can meet fewer of the commitments that the President and the National Security Council lay upon us, and that is what we will do. We will seek to have the Nation face up to cutting its commitments.

Senator WILSON. I think you ought to repeat that loud and clear at every opportunity.

In your 600-ship Navy, are there going to be adequate auxiliaries?

AUXILIARIES

Secretary Lehman. Yes. We think we have got a good balanced program. There is an issue however. We have delayed the program in the budget, for the AE's and the AOE's, the oilers and resupply ships, because we are not satisfied yet that we have a design that is affordable and that can be produced in sufficient numbers to meet our requirements. We are working very hard on that, and we will have them in the program in time to meet the retirements of the ships they will replace.

But otherwise, the auxiliaries are, I think, well funded by a very imaginative, cost-savings approach that George Sawyer and Ev Pratt, our Assistant Secretaries for Shipbuilding, pioneered in getting—the whole package of 13 pre-positioning ships, the T-5 tankers, the package leasing of tanker oiler services and so forth has saved an enormous amount of money and gotten ships built and modified like the SL-7's, for a fraction of the money originally in the budget.

Senator Wilson. All right.

Finally, will you provide for the record cost-saving details?

Secretary Lehman. Yes.

Senator Wilson. I would like to see spelled out the savings that have been reported.

Secretary Lehman. I shall.

Senator Wilson. Thank you.

[The information follows:]

Savings for the 13-Ship Maritime Pre-positioning Ship (MPS) program and the 5-ship T-5 Tanker program have been significant. Compared to original program and budget estimates, savings are as follows:

Approximately $35M/ship in MPS ship construction/conversion costs. Savings achieved by utilizing commercial specifications and standards vice military specifications. Total savings: $455M.

Operating hire cost savings in excess of $700M over the life of the 25-year charter as a result of extremely successful negotiations among Navy, ship operators and the maritime unions and instituting a competitive environment for the first time.

Capital hire savings of approximately $400M. The capitalized costs of the 18 ships is $2.7B as compared to the cost to the Navy of approximately $2.3B on a present value basis.

Savings on the TAKR conversion program have been $82M.

Chairman Goldwater. Senator Denton.

Senator Denton. Thank you, Mr. Chairman.

Picking up where we were, Mr. Secretary, Admiral, and General, without belaboring too many fundamentals, you mentioned, Mr. Secretary, I think, your concurrence in the idea that we probably have not matched the security that we had 20 years ago despite the improvements we have made in the last 4 years in terms of the Navy. Then you mentioned something that I wanted to pursue, and that is the U.S. loss of confidence in the minds of its allies, or potential allies, or former allies, which I think could be comfortably coupled with the loss of U.S. credibility in the minds of nations which are not that friendly. I see all sorts of new forces and trends involving the cop-out, perhaps unprecedented for any nation, certainly for the United States, on the word of four consecutive Presidents regarding Vietnam. In my view that was not a military failure but a failure in understanding on the part of Congress, in the end, which was too much media-led. I exclude all present company.

Iran: We did not even give the Shah a place to die. Angola: President Carter tried to stop Brezhnev by saying, "Mr. Brezhnev, if you continue to transport Cubans over on Russian ships, I will try to do something to make it unpleasant for you." That was too much for Walter Cronkite and the others that night. They jumped all over him, and Congress the next day said, Jimmie, what are you trying to do, start another Vietnam? Get back in your hole.

Afghanistan: It was invaded, the first invasion by a major power since World War II, which was supposedly what that war was fought about and why the United Nations was formed.

Things have happened in Syria, Libya, Cuba, Nicaragua. Just to give you an idea of some forces and trends which you may not be that intimately aware of, and because of my particular capacity as chairman of the Subcommittee on Security and Terrorism, one haul of cocaine in Colombia last year—one seizure, amounted to $1.3 billion worth of cocaine. In that seizure, it was learned that one Marxist terrorist group got $100 million in either extortion or collaboration money, we have not ascertained which.

There are new forces and trends involved all over the world that, I think should inject much caution in your assertions that we are improving and we are getting there.

Mr. Chairman, I find you probably the most articulate man in this Congress about defense needs, something that I think is key.

I am writing a series of letters to the administration and to our colleagues about an example of a failure in what I regard as security policy, which includes foreign policy and intelligence policy as well as defense policy. The example is the rise in oil prices from 1973 through 1979. I know an admiral who had heart failure when the price rise in 1973 happened. He said, "It is the end of the world, Jerry," and I said, "Well, sir, I hope not."

I asked several international affairs experts, of which I consider myself not one, if they thought that the Saudis would have tripled the price of oil in 1 day in 1963. They said no. Why not? They gave the same answer I felt and feel, that in 1973 the United States was perceived by the Saudis as well as by other nations a becoming incapable of discerning what its interests were and incapable of pursuing those interests. Therefore, they took advantage of it.

Now, I do not dislike the Saudis. I helped with the AWACS sale. If I had been a Saudi, I would probably have tripled the price, too. But they did not need to triple the price in 1 day. They could have more gradually increased the price. They could not even import, as you could tell from looking at the ships off Jidda—82 I saw at one time—which could not trans-ship to shore fast enough, and their cargoes were rotting.

It has wrecked the social life and well-being of countries like Kuwait and so on. They did not need it that fast. We did not get much hurt.

Mr. Chairman, the point is I have quantified, from a look at Department of Energy figures prepared under the Carter administration, at the cost of that foreign policy failure. The numbers are from the "Consumer and Energy Impacts of Oil Exports, An Updated Report," published on February 6, 1984, and they are taken from "The Interrelationship of Energy and the Economy," 1981, chapter 2, of the Department of Energy publications prepared under the Carter administration.

The study concluded that for every 1 percent of our gross national product that the national oil bill increased, the gross national product declined by approximately 1.2 percent, the rate of inflation increased by 0.7 percent, and unemployment increased by 0.4 percent.

Now, here is the bottom line. For the 1970's, annually, we paid a price of $40 to $50 billion every year in constant 1973 dollars because of rising energy prices. We suffered an additional 2 to 3 percentage points of inflation, in addition to whatever other inflation there would have been, and lost 1 million to 2 million jobs per year.

If you add that up and quantify it, remembering that 1 percent of unemployment is like $30 billion or so in gross national product, you come to figures, Mr. Chairman, for in the instance of one security policy failure alone, Vietnam, reflected in one country in one commodity, oil, that show that it cost the United States more per year during the 1970's than the current deficit is running.

The connection has to be made, gentlemen, between failures in security policy and the cost to the domestic economy, and what that means in terms of the relationship between welfare, the general welfare, and our security.

Do you generally agree with what I am saying, gentlemen?

Secretary **LEHMAN**. Absolutely.

Senator **DENTON**. Thank you, Mr. Chairman. I just wanted to get that in the record.

Chairman **GOLDWATER**. That was an interesting question.

I do not think we have any more questions. You gentlemen may submit questions for the record.

[Questions with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR BARRY GOLDWATER

SMALL BUSINESS SET-ASIDE FOR OVERHAULS

Senator **GOLDWATER**. Last year a Boston shipyard briefly held one of your frigates hostage in a contract dispute. The Navy eventually towed the ship away, alleging poor workmanship on the yard's part in overhauling the warship.

What exactly had the shipyard done wrong?

Why did the Navy give that yard an overhaul contract in the first place?

With so many capable and experienced shipyards under-employed, why didn't the contract go to one of them?

Secretary **LEHMAN**. The Navy's job order for the regular overhaul of the USS *Connole* (FF 1056) was terminated for default due to the contractor's, Boston Shipyard Corporation (BCS), failure to make adequate progress in accordance with the specified terms and conditions of the contract. Specifically, the contractor failed to provide the management, planning, initiative and resources necessary to accomplish the overhaul in an orderly manner to meet the established schedules. These deficiencies had an adverse impact on the overhaul and resulted in the contractor's failure to accomplish the following requirements:

The ship was not docked within eight days after start.

The main feed pumps were not removed, crated and shipped to the repair activity within the specified time.

A dedicated ship's force coordinator was not provided and the required integration of contractor work with ship's force work was not accomplished.

Contractor furnished material was not ordered and reviewed nor was a list of required material that identified critical material provided.

Proper safety procedures were not employed, such as: Adequate fire main pressure was not maintined. Initial defueling procedures were not safely performed.

Safe Asbestos removal procedures were not followed and adequate protection of the ship's equipment from contamination during asbestos removal was not accomplished.

Proper working access to storage areas was not provided.

Reliable temporary services to the ship were not provided.

The contractor's failure to perform in accordance with the specified terms of the job order resulted in a lack of physical progress on the overhaul. This was evidenced by a lack of correlation between physical progress and elapsed time of the overhaul's scheduled duration. Based on those conditions, the Navy determined that redelivery of the USS *Connole* by the specified date could not be achieved by the contractor.

There were seven bidders for the overhaul, all of whom were found to be technically acceptable. Boston Shipyard Corporation (BSC) was the apparent successful offeror due to its low bid.

A Pre-Award Survey was conducted. Based on the survey team's report, the contracting officer issued a contemporaneous modification to the contract directing BSC to correct discrepancies. A Post-Award Survey Team confirmed that BSC had taken the corrective action directed by the contemporaneous modification.

The Navy was concerned over awarding to a yard with no prior experience and did provide assistance in an attempt to avoid what ultimately transpired. However, this solicitation was a small business set-aside and, absent evidence that BSC would not deliver what it said it could in its basic proposal, an award was made. It was obvious that the SBA would issue a Certificate of Competency which would have required award.

A decision not to award to BSC, would have required an initial determination that BSC was not responsible. Based on the Navy's pre-award survey, all identified deficiencies were judged to be correctable prior to the commencement of the overhaul. Without objective evidence that BSC could not perform, a determination of non-responsibility was not supportable.

Questions Submitted by Senator Strom Thurmond

RECRUITING AND RETENTION

Senator **Thurmond**. The Army has experienced a drop in recruitment and the reenlistment rate for first-term soldiers. Has the Marine Corps experienced a similar trend? Admiral Watkins, how about Navy?

Admiral **Watkins**. The Navy has seen a slight decline in the first-term reenlistment rate, declining 3.7 percentage points in the first quarter of FY-85, compared to the same period in FY-84. Navy has also experienced a drop in recruitment. Although the FY-84 recruiting statistics reflect a successful year in terms of recruit quality, this success was due to the high quality of our Delayed Entry Program (DEP) at the start of the year. The true indicator of recruitment difficulty is new contract production. Not only has the quality fallen off during the first four months of FY-85 (87 percent High School Diploma Graduate (HSDG) and 63 percent Mental Group I-IIIA versus 99 percent HSDG and 67 percent Mental Group I-IIIA during the same period in FY-84), but total planned members of new contacts are not being realized. This new contract decline is being reflected in draw-down of our Delayed Entry Program.

STRATEGIC HOMEPORTING CONCEPT

Senator **Thurmond**. Would you provide for the record the Navy's analysis concerning Strategic Homeporting and its cost effectiveness versus porting in existing facilities?

Secretary **Lehman**. For several years, Navy has been reviewing its ship homeporting posture. The present homeport assignments in the continental U.S. and Hawaii are not optimum from a strategic, military, or loading standpoint. Our major homeports such as Norfolk, San Diego and Charleston are near capacity. We have more than 120 ships homeported in Norfolk, 112 in San Diego, and more than 60 in Charleston. The question arose of how best to accommodate the additional ships coming into the fleet.

Cost effectiveness is of course a prime factor in the strategic homeporting concept, along with strategic dispersal of fleet units.

Our rationale for expanding the number of homeports is based on five principles: dispersal, battlegroup integrity, spreading competition in the industrial base, development of suitable ports, and advantageous use of the national geography for training and operations. These goals enhance our ability to perform our mission.

There is an additional small cost both in establishment and operation of new bases; that cost is warranted by the simple fact our fleet is growing, and the new units must be homeported somewhere. We strongly believe they should be in new ports where their survivability can be enhanced, and the competitive industrial base increased.

CHEMICAL WARFARE

Senator **Thurmond**. The issue of chemical retaliatory capability becomes more critical each year that the Congress fails to fund it, and our distinguished chairman, Senator Goldwater, has indicated that it will receive high priority in our review of the budget this year. Admiral Watkins, what happens to carrier flight operations if persistent chemical agent is employed against our aircraft carriers?

Admiral **Watkins**. If an aircraft carrier receives a heavy concentration of persistent agent from the delivery of a precision guided munition, [deleted]. The cumulative degradation, would depend on the nature of the agent, location, extent of contamination, and environmental conditions.

It should be noted, that given some warning or indication of an impending chemical attack, the present water washdown system could be pre-activated. Nerve agents which are miscible in water would largely be hydrolyzed or washed overboard, thus reducing contamination levels and resultant out of action times. In order to provide advanced warning against air-borne chemical agent vapors or aerosols, we have begun installing the first long range chemical agent detector, the AN/KSA-1 Chemical Warfare Directional Detector, aboard our ships.

The present ship water washdown system is effective at preventing gross contamination of exposed decks. After an attack, the water washdown would be followed by decontamination scrub downs [deleted]. When contamination is reduced to a tolerable level, final decontamination can be left to natural evaporation of the agent.

Senator **Thurmand**. General Kelley, what happens to Marine Corps ground operations if a persistent chemical agent is used against Marine Corps units?

General **Kelley**. As would be the case for any military force, Marine Corps ground operations would be degraded if persistent chemical agents were used against our units. Unless the contaminated areas could be avoided, Marines would be forced to fight in chemical protective clothing and masks. Such equipment would impose a heavy heat burden, and would reduce the ability to see, hear and communicate. New equipment under development will alleviate these problems somewhat. Nonetheless, enemy units would enjoy a major advantage unless they were also forced to wear chemical protective equipment.

SPECIAL OPERATIONS FORCES (SOF)

Senator **Thurmond**. What responsibility does the Director of Naval Intelligence exercise in formulating intelligence policy, planning, and coordination in support of naval SOF?

Secretary **Lehman**. The Director of Naval Intelligence exercises overall responsibility and authority within the Navy in matters pertaining to intelligence requirements, collection, production, and dissemination. He also formulates and coordinates related policy and advises concerning intelligence equipment, doctrine, and techniques. He determines the effectiveness and responsiveness of intelligence to meet current, contingency and mobilization requirements of the Navy and ensures deficiencies are corrected.

Senator **Thurmond**. What specific naval intelligence resources are dedicated to naval SOF contingency requirements around the world?

Secretary **Lehman**. In the FY-86 Naval Intelligence budget request, $3,657,558 is allocated for intelligence support of Naval Special Warfare activities worldwide. This total includes funding for 83 active duty intelligence specialists and 151 Naval Intelligence Reserve personnel assigned to support this function. These levels reflect an increase of $786,500 and 18 active duty intelligence specialists over the amount budgeted in FY-85.

Senator **Thurmond**. How do these intelligence resources match the contingency production requirements of naval SOF?

Secretary **Lehman**. These resources are part of the total naval intelligence production effort which supports all aspects of naval warfare. The current support specified for the naval SOF has taken the form of collection, processing, analysis and compilation of intelligence data needed to [deleted].

In addition, active duty officer and enlisted Intelligence Specialist personnel are assigned to each of the naval SOF units to maintain the unit's currency on the threat situation and to provide effective communication of intelligence collection and production requirements through the Navy and National intelligence chains.

Senator **Thurmond**. Who is directly responsible for ensuring that naval SOF intelligence requirements worldwide are met and satisfied?

Secretary **Lehman**. The Director of Naval Intelligence is responsible to the Chief of Naval Operations (CNO) for implementing the policies of the Navy with regard to intelligence and serves as the principal staff advisor to SECNAV and CNO in related plans, programming and policy matters regarding intelligence. Support to Navy SOF is included in these responsibilities.

Senator **Thurmond**. To what degree are these production requirements not being met at the present time?

Secretary **Lehman**. Each [deleted] have been completed to date.

Senator **Thurmond**. What intelligence, if any, did naval intelligence provide naval SOF prior to Operation Urgent Fury? If not, why?

Secretary **Lehman**. [Deleted.]

Senator **Thurmond**. Who is responsible for validating all current and future intelligence requirements for naval SOF? For the record, please provide those requirements and the resources assigned to satisfy them.

Secretary **Lehman**. Intelligence collection and production requirements are validated by DIA. Navy's special warfare forces have intelligence needs quite similar to their Army and JSOC counterparts, and in that regard, DIA has validated [deleted]. These validated collection requirements include the specific information needs of naval SOF. U.S. Unified Commands (i.e., USCINCLANT, USCINCPAC, USCINCEUR), through their naval components, exercise operational control of assigned Navy SOF. Their naval component commands (i.e., CINCLANTFLT, CINCPACFLT, and CINCUSNAVEUR) often submit additional intelligence collection requirements which directly support the intelligence needs of their assigned naval SOF.

Naval Intelligence planning in support of naval SOF consists of planning and programming of resources required and/or the establishment of DIA-validated intelligence collection requirements to provide the intelligence data and documentation needed to support the target priorities and operation plans established by the U.S. Unified Commanders. Additionally, [deleted].

U.S. Unified Commanders' intelligence production requirements are coordinated with [deleted].

FICEURLANT and FICPAC are currently assigned primary responsibility for naval SOF intelligence production. Each organization has established a Special Operational Branch specifically tasked to produced these tailored intelligence reports, the SOIFs. FICEURLANT has four full time active duty personnel assigned to this branch (2 officers and 2 enlisted).

Additional intelligence research analysis assigned to three separate Naval Reserve Units. There are a total of 118 individuals assigned to these three Reserve units, 44 of whom are totally dedicated to supporting the Special Operations Branch. FICPAC has eight full time active duty personnel assigned to its Special Operations Branch (2 officers and 6 enlisted). A single Naval Intelligence Reserve Unit, with 40 intelligence specialists currently assigned, provides support to FICPAC's Special Operations Branch. FICEURLANT's Special Operations Branch also interfaces on a regular basis with Navy Special Warfare Group Two to ensure that operator questions and requirements are being answered to their satisfaction within the constraints of the available intelligence source data. FICPAC, which did not have naval SOF Selected Reservists assigned to this intelligence production function prior to last fall, is in the process of establishing similar procedures. Additionally, there are active duty intelligence officers and enlisted personnel assigned to the naval SOF units.

Questions Submitted by Senator John Warner

SDI

Senator **Warner**. The Navy has little or no research activity that has been included in the Strategic Defense Initiative. Nonetheless, if SDI research is successful and there is eventually a decision to develop and deploy defenses, the Navy's offensive nuclear arsenal would be affected. What are your views, both as an individual and as one of the President's principal military advisors, with regard to the SDI program and its objectives?

Admiral **Watkins**. Along with all the other members of the Joint Chiefs of Staff, I strongly support the Strategic Defense Initiative. Moving away from exclusive dependence on massive and rapid offensive nuclear retaliation and toward greater reliance on defensive systems is both militarily and morally sound. By reducing or eliminating the threat from nuclear armed ballistic missiles we can enhance deterrence and ultimately more to a safer, more stable world. In addition, reducing the effectiveness and hence the value of ballistic missiles will increase the incentives for meaningful arms reductions. These reductions would obviously include Navy systems along with all others. Until SDI has come to fruition, however, we must continue to rely on the capabilities of our offensive retaliatory forces. Thus, while I strongly support SDI, it is not a substitute for fully implementing the President's Strategic Modernization Program.

Although the Navy's share of the total SDI effort is not large and the Navy's mission does not include a key role in ballistic missile defense, our contributions to technology research and development could substantially impact the direction and success of the Strategic Defense Initiative. At present, our level of effort represents about 5 percent of the total SDIO TOA and spans our entire R&D community. The Navy is also initiating a study to explore further and define potential and promising Navy roles that will aid strategic defense.

TRIDENT II (D-5) AND FIRST STRIKE

Senator **Warner**. Secretary Lehman, concern is being expressed by some that the Trident II missile, by virtue of its high yield payload and accuracy, may constitute a so-called first strike capability. Would you comment on this missile's capabilities and intended roles, and indicate how its survivable basing contributes to stability?

Secretary **Lehman**. The Trident II (D-5) missile contributes positively to stability by providing a capable weapon in a survivable basing mode. Submarine launched ballistic missiles (SLBMs) constitute our most survivable strategic deterrent force. D-5 will be our most effective SLBM and will provide the hard-target-kill capability that is required by the national objectives of the Strategic Modernization Program. The improved accuracy and yield of D-5 will allow our sea-based nuclear retaliatory force to hold at risk the full spectrum of Soviet targets, including leadership bunkers and missile silos which the Soviets value most.

The role of our SSBN force is sure and effective retaliation—not first strike. It is unrealistic for the U.S. to develop a "first-strike" capability, nor is it in our policy to seek such a capability. To do so, we would have to believe that we could, by executing such a first-strike, deny the enemy's capability to damage the U.S. beyond some acceptable level. The U.S. cannot reasonably deploy enough weapons to destroy with assurance all Soviet ICBMs that might threaten the U.S. Nor can we prevent the Soviets from launching their forces to avoid destruction. In addition, Soviet at-sea SSBNs, while not as capable as ours, constitute a large, effective force largely invulnerable to a pre-emptive attack. Therefore, it is inconceivable that we might plan for a "first-strike" capability, and even more inconceivable that we would use survivable, sea-based strategic missiles in such a role.

The D-5 will be deployed in survivable submarines in order to increase strategic stability. Failure of the U.S. to possess survivable and assured retaliatory capability in the face of the rapid Soviet strategic weapons buildup would be destabilizing indeed. Our credible hard-target-kill capability in a survivable basing mode reduces the Soviet incentive to initiate aggression. The Soviets would have no doubt of U.S. ability to retaliate effectively. This system will significantly raise Soviet uncertainty in their assessment of gain or loss by a first-strike against the U.S., thus increasing the level of stability.

TRIDENT II (D-5) CAPABILITIES

Senator **Warner**. Admiral Watkins, would you care to add anything with regard to Trident II's capabilities?

Admiral **Watkins**. The Trident II (D-5) will provide superior deterrent capability. Now in its second year of full scale engineering development, the D-5 missile will have a combination of long range, increased payload, improved accuracy and be housed in the most versatile, stealthy and survivable launching platform in the world, the *Ohio* class Trident submarine.

The concept of a strategic Triad provides this nation its fundamental defense through deterrence. Deterrence has worked since the inception of strategic nuclear forces. The need to maintain a survivable Triad is clear. The capability and variety of the U.S. triad of offensive forces complicates Soviet first strike planning and gives the United States the flexibility for retaliatory response. Previous U.S. strategic force modernization has not kept pace with Soviet capabilities. The President's Strategic Modernization Program is designed to address this problem and deserves continued support.

POSEIDON DISMANTLEMENT

Senator **Warner**. When, as a practical matter, does the Navy need to begin taking steps to dismantle a Poseidon submarine to remain in compliance with the SALT II MIRV missile limits?

Admiral **Watkins**. If a Poseidon submarine is designated as compensation for SALT, advance planning for dismantlement must begin fifteen months in advance of the start of dismantlement (the submarine in the shipyard with the missile tubes empty and open). With the advance planning accomplished, we require approximately one month advance notification of a final dismantlement decision in order to relocate the ship and crew, off-load missiles, and sail to the shipyard.

DECOMMISSIONING POSEIDON SUBMARINES

Senator **Warner**. Would the Navy, in the absence of arms control constraints, propose to decommission Poseidon submarines in the next five years before the end of their nominal thirty year life, and if so, why?

Admiral **Watkins**. In the absence of arms control or fiscal constraints, we plan to retain Poseidon submarines to the end of their nominal thirty year life. We will review the retention of Poseidons each year as we prepare our future budgets and as decisions are made in accordance with available funds and military requirements.

READINESS AND SUSTAINABILITY GOALS

Senator **Warner**. My concern is that we are deploying a large number of new ships and weapons systems, yet we may fall short in providing the necessary munitions, i.e., missiles, torpedoes, and the necessary spare parts to maintain the readiness and sustainability levels required to meet wartime commitments.

Can you describe the Navy's status and plan to ensure that these readiness and sustainability goals are met?

Secretary **Lehman**. The Navy's spare parts contribution to readiness and sustainability has been improving steadily for both new and existing ships and weapons systems. The FY-86 budget request continues the Navy's full funding of readiness-related spare parts. In addition, the $261M request for war reserve spare parts represents both a significant increase over the FY-85 funding level and a large increment in moving toward full achievement of the Defense Department's sustainability objective.

There have also been significant and impressive improvements in munitions; improvement trends in weapons at sea since 1981 are dramatic, with cruise missiles showing a five-fold increase; air-to-air missiles a four-fold increase; surface missiles a two-and-a-half-fold increase; air-ground missiles a fifteen-fold increase and torpedoes a two-fold increase. The following chart portrays the projected sustainability at the end of each delivery period for some specific newer, modern munitions as measured against our long-range sustainability requirements: [Deleted.]

EXPERIENCED NUCLEAR OFFICER SHORTAGE

Senator **Warner**. As Admiral Watkins has stated in his report, the shortage of experienced nuclear qualified officers (LCDR-Captain) is a very serious manpower problem. These officers are, of course, essential for manning our Trident and SSN attack submarines. Can you describe what efforts are being taken to improve retention rates for these officers?

Secretary **Lehman**. Navy has submitted legislative proposals to modify Nuclear Officer Incentive Pay and Submarine Duty Incentive Pay which are specifically targeted at improving the retention of experienced nuclear qualified officers. The Enhanced Nuclear Officer Incentive Pay package increase authorized payment levels to restore eroded incentive value, expands eligibility criteria to better target experienced officers, and provides improved management flexibility to more effectively respond to the growing shortage. The Submarine Duty Incentive Pay package eliminates the pay table reductions which occur during an officer's submarine commanding officer tour and again during essential post-command tours.

Navy projects that these proposals will result in an immediate reversal of the shortage growth. Additionally, the experienced nuclear officer shortage projection for FY-90 is reduced from 22 percent to 11 percent.

PERSONNEL STRENGTHS

Senator **Warner**. Mr. Secretary, along with other members of this committee, I have indicated my concern over the continuing request for increases in active duty personnel.

I note that this year the Navy is asking for an increase of 15,000 personnel and the Marine Corps an increase of 1,200.

Last year, the Navy asked for about 10,000 and received about 6,600. The Marine Corps asked for about 3,000, and received about 2,000.

I know that it obviously requires more people to man a 600-ship Navy, but I would like to her what measures you have taken to operate more efficiently and the progress you are making in increasing the use of the Naval Reserves.

Secretary **Lehman**. The increasingly sophisticated threat facing surface ships today and through the year 2000, when combined with constrained manpower resources, requires a significant investment in automated weapons and propulsion systems. This automation has had the positive effect of reducing the number of personnel required to operate and maintain equipment and has substantially increased reliability and efficiency. The introduction of gas turbine propulsion for all new combatants since 1975 (DD-963, DD-993, FFG-7, CG-47 and DDG-51 classes) has also reduced by about half the number of people required for propulsion when compared to similar steam-powered ships. For example, the 1960's-vintage CG-16 class steam-powered cruiser requires approximately 28 officers and 478 enlisted personnel. The newly-introduced, much more capable CG-47 Aegis class cruiser requires 22 officers and 331 enlisted, a decrease of 30 percent from the CG-16 class. The FFG-1 class guided missile frigate, also constructed in the 1960s, requires approximately 17 officers and 313 enlisted personnel. The modern, significantly more capable FFG-7 class guided frigate requires only 13 officers and 193 enlisted, approximately two-thirds of the manning requirement for the FFG-1 class.

In addition to reducing the required manning levels aboard ships in the active Navy, we have made impressive progress over the last year in increasing the use of the Naval Reserve. This progress and the Navy's plans for future progress are detailed in the latest annual "Report to the Congress on the Navy's Total Force." Examples, drawn from the Report, are provided below:

The Navy has united with the U.S. Coast Guard to establish Maritime Defense Zone commands for the protection of U.S. coastal waters and harbors and ports. The Naval Reserve will provide a significant portion of forces made available to these new commands.

We have added new mission of land-based aerial refueling to the capabilities of the Naval Reserve and will procure suitable aircraft.

Navy is modernizing the two carrier-based tactical aircraft wings in the Naval Reserve. These wings will provide the wartime striking power for two of the Navy's active carriers.

26 modern ASW frigates are being transferred to the Naval Reserve for wartime convoy escort and battle group support work.

We will place 17 new minesweeper hunter (MSH) class vessels and 8 new mine countermeasures (MCM) ships in the Naval Reserve to combat the wartime threat to U.S. harbors and ports. Twenty-two smaller Craft of Opportunity will be placed in the Naval Reserve to augment U.S. mine countermeasures capabilities.

Naval Reserve manpower is being dramatically increased to accommodate these and many other growth initiatives. Reserve end-strength has already increased by over 31 percent since 1980 (while active end-strength has grown by only 10 percent in the same period). The new Sea Air Mariner Program successfully brought 10,000 new sailors into the Naval Reserve last year and similar success is expected this year. The Navy anticipates that the Naval Reserve will grow to its full manpower planning goal by fiscal year 1988.

600-SHIP NAVY PERSONNEL REQUIREMENT

Senator **Warner**. Also, would you tell me please what is the total number of personnel you project as the requirement to fully man the 600-ship Navy?

Secretary **Lehman**. We currently project a requirement for about 614,000 active duty end strength to man a ready and sustainable 600-ship Navy capable of supporting our National Strategy.

In order to put this requirement for active duty personnel into perspective, we must review our expansion to the 600 ship Navy. We are now entering the second half of the planned expansion. In 1981 it was apparent that in order to execute the military strategy of Allied Maritime Superiority, we would require a Navy structured around a fleet consisting of 600 ships/15 Carrier Battle Groups. Initial plans called for active duty personnel to increase by almost 100,000 to about 620,000 by 1990, with a projected level of 608,000 by 1985. With congressional support we have remained largely on target with respect to hardware, however, our approved end strength level for 1985 is only 575,000, 33,000 below the level initially planned.

By concentrating our growth during the past four years almost entirely towards operating forces, we have achieved substantial increases in fleet readiness.

In order to sustain the current levels of fleet readiness we must allow required growth in maintenance, training, medical, and logistics support areas. Thus, along with continued stress on providing quality personnel to man the operating forces, we are directing more of our planned resources to the efficient and effective manning of these support areas. Reductions to this growth will result in reduced levels of readiness.

SEALIFT

Senator **Warner**. Last year this committee was advised that there was a shortfall in sealift available to move U.S. forces for contingency operations.

Would you give us an update on the status of sealift available and describe what shortfall still exists?

Secretary **Lehman**. We now have significantly more sealift available than at this time last year. In the government controlled, inactive strategic sealift reserve, our Ready Reserve Force numbers 64 ships, double what we had last year, with 11 additional ships recently purchased. This force is growing toward 100 dry cargo ships and at least 16 tankers. We also have four Fast Sealift Ships which recently were delivered with four more delivering in FY-86. Each of these ships is to be maintained in a reduced operating status (ready to commence loading in four days) and is capable of transporting unit equipment to a crisis zone at 30+ knots.

The Military Sealift Command (MSC) common user ocean transport ships number 34, which along with our prepositioning forces comprise the government controlled active strategic sealift assets. The present composition of the Prepositioning Force is 17 Army/Navy/Air Force/Marine Corps prepositioning ships (the Near Term Prepositioning Force) sited at Diego Garcia and in the Mediterranean, and four Maritime Prepositioning Ships. Nine additional Maritime Prepositioning Ships are under conversion/construction and will become operational by the end of 1986. Our goal for Prepositioning Forces is to have three MPS squadrons (one each in the Atlantic, Pacific and Indian Oceans) carrying USMC equipment and 13 Army/Navy/Air Force Prepositioning ships sited at Diego Garcia and in the Mediterranean.

These government assets coupled with approximately 350 ships of the U.S. Flag Fleet, our sealift enhancement programs, and approximately 45 ships of the EUSC Fleet will provide sufficient sealift to move the unit equipment and resupply material of the Rapid Deployment Force in the event of a crisis. Our on-going sealift programs will enable us to compensate for the shortfalls identified during and after the Strategic Sealift Study.

Questions Submitted by Senator Gordon Humphrey

NAVAL INTELLIGENCE BUDGET

Senator **Humphrey**. What is the budget authorization request for Naval Intelligence activities for FY 86? How has this changed from FY 85?

Secretary **Lehman**. The budget authorization request for all Naval Intelligence activities is [deleted]. The corresponding figure for FY 85 is [deleted].

INTELLIGENCE SUPPORT FOR NAVAL SPECIAL WARFARE ACTIVITIES

Senator **Humphrey**. What portion of the FY 86 Naval Intelligence budget request is allocated for intelligence support of Naval Special Warfare activities worldwide? What is the change from fiscal year 85 budget request?

Secretary **Lehman**. In the FY 86 Naval Intelligence budget request, $3,657,558 is allocated for intelligence support of Naval Special Warfare activities worldwide. This total includes funding for 83 active duty intelligence specialists and 151 Naval Intelligence Reserve personnel assigned to support this function. These levels reflect an increase of $786,500 and 18 active duty intelligence specialists over the amount budgeted in FY 85.

CONTINGENCY INTELLIGENCE TO NAVAL SPECIAL WARFARE

Senator HUMPHREY. Did the Director of Naval Intelligence foresee the requirement to provide contingency intelligence to Naval Special Warfare assets prior to Operation Urgent Fury? If so, what specific information was provided by Naval Intelligence to those assets?

Secretary LEHMAN. Yes, Naval Intelligence activities were actively engaged in a program to generate specially tailored target intelligence folders for Navy Special Warfare assets. [Deleted.]

TRACKING CURRENT AFFAIRS

Senator HUMPHREY. What Naval Intelligence analysis resources were assigned to tracking current affairs and anticipating threatening behavior adverse to U.S. interests prior to Operation Urgent Fury?

Secretary LEHMAN. This sort of analysis is conducted primarily by the Central Intelligence Agency, the Defense Intelligence Agency, the State Department, and the Unified Command for the theater in which Grenada is located and is not a normal function of the Office of Naval Intelligence. The Fleet Intelligence Center, Atlantic, and the intelligence staff of the Atlantic Fleet Commander both had and continue to have analytic resources dedicated to keeping track of current affairs in areas which, like Grenada, have potential for U.S. involvement.

NAVAL INTELLIGENCE PREPAREDNESS TODAY

Senator HUMPHREY. What is the level of Naval Intelligence preparedness today in support of Naval Special Warfare Contingency requirements worldwide? How does this condition compare to the level of readiness prior to Operation Urgent Fury?

Secretary LEHMAN. Our preparedness is greatly improved since Urgent Fury. [Deleted.]

INTELLIGENCE RESOURCES OUTSIDE NAVY

Senator HUMPHREY. To what degree did Naval Intelligence rely upon intelligence collection and production resources outside the Department of the Navy to provide specific intelligence data for Naval Special Warfare assets assigned to Operation Urgent Fury?

Secretary LEHMAN. As stated previously, the Special Warfare forces which were engaged in combat during Operation Urgent Fury [deleted].

INTELLIGENCE SUPPORT OF NAVAL SPECIAL WARFARE REQUIREMENTS

Senator HUMPHREY. In what area(s) of the world today is there a total absence of specifically tailored naval intelligence in support of Naval Special Warfare worldwide contingency requirements?

Secretary LEHMAN. Special Warfare contingency requirements (i.e., targets) are spelled out in various Operation Plans and Contingency Plans. There is an orderly program to provide tailored intelligence support packages for each of these targets. [Deleted.]

WARNING TIME

Senator HUMPHREY. How much warning time did the Office of Naval Intelligence have to prepare specifically tailored intelligence for Naval Special Warfare assets assigned to Operation Urgent Fury? What intelligence resources, if any, were assigned prior to this warning and what finished intelligence products were made available to Naval Special Warfare assets specifically for Operation Urgent Fury?

Secretary LEHMAN. The Special Warfare forces which engaged in combat during Operation Urgent Fury [deleted].

QUESTIONS SUBMITTED BY SENATOR WILLIAM COHEN

LAMPS MK III HELICOPTER

Senator **COHEN**. Mr. Secretary, last year all four committees dealing with the defense budget added six SH-60Bs to the 18 requested to provide a more efficient production rate of two aircraft per month, which you supported in your prepared statement before this Committee last year, as well as in your testimony of March 6, 1984, before the Defense Subcommittee of the Senate Appropriations Committee.

This year I notice the budget request is again for 18 helicopters, presumably because the Navy could not afford funds for the continued rate of 24.

Since the Navy has already embarked on 24 aircraft per year and the prime contractor and its subcontractors can deliver less costly helicopters at the more efficient rate of two per month, does it not make sense to maintain the same rate in fiscal year 1986?

Will you support the initiative of this committee if it adds funds for six additional SH-60Bs this year?

Secretary **LEHMAN**. [Information not received in time for printing.]

QUESTIONS SUBMITTED BY SENATOR DAN QUAYLE

IMPROVING TRIDENT AND SLBM ACCURACIES AND RANGE

Senator **QUAYLE**. Is it possible to retrofit Trident II with an advanced laser ring gyroscopic inertial guidance package? If this was done, how much would it cost and what percentage decrease in the missile's estimated CEP would this change produce?

Secretary **LEHMAN**. The packaging density and the existing electronic architecture of the Trident II missile are such that retrofit in the sense of substitution is not possible. Use of a ring laser gyro in Trident II would require a complete redesign of the Inertial Measurement Unit and the guidance system electronics. Ring Laser gyros with appropriate performance and small enough to be used in a redesigned Trident II guidance system would also require considerable development effort. Assuming success in the meeting of performance objectives the accuracy of such a system, when used in a stellar inertial mode, could be about the same as the current Trident II estimate. This approach would significantly increase program cost and delay IOC by 2 to 4 years.

Senator **QUAYLE**. According to a Congressional Research Service Issue Brief, Trident II will carry 75% more payload than Trident I. This report also notes that the Navy publicly stated on October 30, 1981, that by removing a few reentry vehicles, Trident II could achieve ranges greater than Trident I. How many reentry vehicles of what type and warhead yield would have to be removed to achieve ranges comparable to our Minuteman III ICBMs?

Secretary **LEHMAN**. Both Trident I and Trident II weapon systems can achieve target coverage comparable to the Minuteman III ICBM without removing reentry vehicles since the submarine has the capability to position itself so that the missiles are within range of all desired targets when operating with a full load of reentry vehicles. [Deleted.]

Senator **QUAYLE**. If Trident II's inertial guidance package remained the same or was improved as outlined in question one, if stellar update was used, and if the missile's payload was reduced to achieve the approximate range of the Minuteman III, what range of estimated CEPs could we expect if the missile was fired from a fixed point on land?

Secretary **LEHMAN**. Using the Trident II inertial guidance package with stellar update, which is the present baseline, [deleted]. We do not believe that use of a Ring Laser Gyro (RLG) would improve system accuracy.

TERMINAL FIXING SYSTEMS AND NAVY'S MARV

Senator **QUAYLE**. Recent intelligence indicates that Soviet targets may be getting much harder and that some of our missiles may soon become vulnerable to Soviet SA-10 and SA-X-12 air defense systems. To penetrate such crude ballistic missile capabilities and yet retain or improve our ability to threaten very hard targets, wouldn't it make sense to follow the Air Force's efforts to develop not just a MARV for Trident II but a terminal fixing MARV?

Secretary **LEHMAN**. There is no compelling need for full scale engineering development of an inertially guided MARV, or of a terminal fixing MARV, for Trident II at this time. [Deleted.]

Senator **QUAYLE**. Does the Navy have a terminal fixing effort underway to complement its MARV program? If now, why not?

Secretary **LEHMAN**. [Deleted.]

Senator **QUAYLE**. Does the Navy consider it risky to rely on stellar update to improve Trident II guidance and how much of decrease in CEP does this update system provide for Trident II?

Secretary **LEHMAN**. No. Stellar update is baseline for the Trident I system, which has been successfully deployed since 1979, and this same approach is being used in Trident II systems. The accuracy of the baseline D-5 Weapon System is the result of improvements to the navigation system, fire control system, missile guidance system (including an improved stellar sensor), and the missile system. [Deleted.]

The stellar update is an important contributor to achieving the accuracy of the Trident I and Trident II weapon systems. If the Trident II missile were flown in a pure inertial mode, i.e. without a stellar update, the system CEP would [deleted].

ACCURACY

Senator **QUAYLE**. Last year both Secretary Weinberger and Commodore Roger Bacon testified that it was United States and Navy policy to improve the accuracy of our missile systems. I understand that the CNO later established that there was a requirement to achieve near zero CEPs for some of its cruise missiles. Are those points still part of Navy policy?

Secretary **LEHMAN**. We are pursuing R&D efforts which could lead to near zero CEPs for non-nuclear weapons applications. It remains Navy policy to improve the accuracy of our weapons systems where we can increase military effectiveness.

IMPROVING CRUISE MISSILE ACCURACIES

Senator **QUAYLE**. Last summer a photo was published of a test targeting of a Tomahawk missile against an enormous block-like structure sited on land. Yet, in the central European theater, I understand that there are at least 100 key bridges that would require far greater accuracy to hit than this summer's target. Are there no requirements or plans to improve Tomhawk's accuracy beyond the existing DSMAC-based guidance package?

Secretary **LEHMAN**. The Navy's Tomahawk conventional land attack cruise missile (TLAM/C) was designed to attack a wide range of naval related shore targets. As such it was not designed specifically to attack bridges, although it has the accuracy and destructive power to do so. The target building you refer to was only [deleted] wide by [deleted] high and was sized to represent a [deleted] building. The missile impact was only a few feet from its aim point. The current Digital Scene Matching Area Correlation (DSMAC) navigator has demonstrated a missile hit accuracy greater than specified. The combination of high accuracy and large warhead will make TLAM/C a formidable addition to our arsenal when it is fully introduced into the fleet; however, increasing the accuracy would not significantly increase the damage effectiveness of the current warhead on most targets. There are currently no requirements for and no plans to increase the accuracy of TLAM/C.

Senator **QUAYLE**. How will the DSMAC guidance package work in bad weather or at night? What plans does the Navy have to overcome these difficulties?

Secretary **LEHMAN**. The DSMAC guidance system is fully capable of day or night operation. We are interested in potential improvements to meet future Tomahawk and advanced cruise missile design requirements; however, there is no current plan to incorporate a different terminal guidance system into TLAM/C.

Senator **QUAYLE**. Last year Congress provided $14 million to fund the Autonomous Terminal Homing program to help meet before 1990 the near-zero CEP accuracy requirements of a non-nuclear cruise missile capable of destroying very hard point targets. I understand that the Navy is about or has just completed its report to DOD as to how it will cooperate in the development and exploitation of this program. Would you please detail what this report concluded?

Secretary **LEHMAN**. The Department of Defense directed the U.S. Air Force to manage the Autonomous Terminal Homing (ATH) program which the Congress funded last year. As an interested party the Navy has been directed to work with the Air Force in these efforts. A Memorandum of Understanding (MOU) is currently being developed between Navy and Air Force on cooperation in ATH development and exploitation. The Navy has not developed a report on this program.

Senator **Quayle**. Does the Navy hope to use these technologies to upgrade Tomahawk? if not, why not? Also, by what date does the Navy expect ATH will be employed on Navy cruise missiles?

Secretary **Lehman**. The answer to the need for and application of Autonomous Terminal Homing (ATH) technologies for the Tomahawk conventional land attack cruise missile (TLAM/C) is not yet in. As part of the MOU currently being developed between the Navy and the Air Force, the Navy is in the process of total systems evaluation pertaining to ATH technologies. The accuracy requirement of the current missile is exceeded by the Digital Scene Matching Area Correlation (DSMAC) navigator for most target requirements. Future Navy cruise missiles may employ some form of ATH. The Navy is investigating the potential offered by these technologies.

FORCE MULTIPLIER EFFECT OF TOMAHAWK

Senator **Quayle**. If there is no easy way short of on-site inspection to determine whether or not a particular cruise missile is nuclear or non-nuclear, wouldn't this act as an automatic force multiplier? That is, wouldn't the Soviets have to assume that every cruise missile carrier they could see might be carrying a nuclear cruise missile?

Secretary **Lehman**. There is no doubt that one of the major benefits of the Tomahawk sea launched cruise missile system is increased deterrence of Soviet aggression. The Soviets can no longer focus their defensive concerns on a relatively small number of naval assets, but must now consider each Tomahawk ship as capable of launching a retaliatory nuclear strike. Fundamentally, we have complemented the carrier battle group strike capability with the employment of the Tomahawk cruise missile on surface ships and submarines. In terms of deterrence, Tomahawk definitely gives us a force multiplier effect.

Senator **Quayle**. Wouldn't this encourage the Soviets to spend more on air defense than they might otherwise?

Secretary **Lehman**. Definitely. This means that less will be available for a further build-up of their offensive forces.

Senator **Quayle**. If we based a number of cruise missiles in submarines, which are even more difficult to target than surface ships, wouldn't this only increase this force multiplication effect?

Secretary **Lehman**. Submarines are an ideal platform for the Tomahawk cruise missile. Not only must the Soviets regard every U.S. submarine as capable of launching a retaliatory nuclear strike, but the Tomahawk missile is a deterrent threat to the Soviets from almost all axes. Obviously the force multiplier effect is particularly applicable here. We must not discount, however, the considerable contribution of further dispersing this significant firepower to our surface forces.

VIRTUAL PROLIFERATION

Senator **Quayle**. If SLCMs encourage the Soviets to act as if we deployed many more nuclear weapons than we in fact have, wouldn't the converse be true as well—that through such "virtual proliferation" we need not deploy as many nuclear weapons to induce increased Soviet spending on defensive measures as we would otherwise?

Secretary **Lehman**. "Virtual proliferation" is a valuable aspect of the Tomahawk system. Our goal is deterrence; that is, uncertainty in the Soviet mind that they can prevail in a nuclear exchange. Since it is impossible for them to know how many nuclear SLCMs are deployed aboard U.S. ships at any given moment, they cannot ignore that we have a high proportion available for a deterrent response. The current plan for deployment of SLCM's is necessary to provide us with considerable flexibility while, at the same time, maintaining the uncertainty of the Soviets.

SLCM'S AND ARMS CONTROL

Senator **Quayle**. Does the Navy have any plans to make it possible to convert nuclear SLCM warheads into conventional ones while on board existing ship platforms?

Secretary **Lehman**. The Navy has no plans to develop such a capability.

IMPROVING CRUISE MISSILE RANGE AND BASING

Senator **Quayle**. Last year the Navy testified that increasing the range of the conventional cruise missile "would give the operational commander increased tactical flexibility in targeting, which may add to strategic deterrence" and noted that additional developments might allow operational range increases to be made to the Tomahawk. What has the Navy done in the last year to extend the range of the conventional land attack Tomahawk missile and what does it plan to do to extend the range in the future?

Admiral **Watkins**. The Tomahawk conventional land attack cruise missile (TLAM/C) is undergoing developmental and operational testing prior to fleet introduction. The missile as designed meets our requirements for range. Increasing the range would require a substantial redesign and testing effort which would delay introduction. This is premature at this stage of TLAM/C development. We are interested in any potential improvements to our weapon systems which result in increased capability at a moderate cost. We will continue to investigate technologies which offer more efficient and effective weapons. There is no current plan to increase the range of TLAM/C.

Senator **Quayle**. Last year the Navy indicated that a preliminary study was underway into the desirable characteristics of a follow-on cruise missile to the Tomahawk. Is this study complete and, if so, what range and accuracy increases did it specify for the follow-on missile over existing Tomahawk ranges and accuracies and what sort of IOCs did it specify for this follow-on weapon?

Admiral **Watkins**. The Navy is not conducting a follow-on cruise missile characteristics study. We have been and will continue to investigate potential improvements to Tomahawk. These improvements and developing technologies may also answer future advanced cruise missile design requirements. Our efforts are focused on the continued deployment of the Tomahawk anti-ship and nuclear land attack variants, while working towards fleet introduction of the conventional land attack Tomahawk. We must proceed expeditiously to make this significant force multiplier available to the fleet in numbers sufficient to meet the growing Soviet naval threat.

Senator **Quayle**. Has any thought been given to extending our cruise missiles ranges by simply building a larger cruise missile airframe and employing existing fuel and jet motor technologies as the Soviets appear to be doing?

Admiral **Watkins**. Increasing cruise missile range by increasing the size of the airframe is certainly possible although there are some significant drawbacks associated with this concept. The size of the Tomahawk allows it to be fired from two classes of attack submarines and six classes of surface ships. This provides us with dispersed firepower throughout the fleet, a significant advantage of Tomahawk. Deploying a larger missile would require major, and very expensive, alterations to our current firing platforms or the building of ships and submarines capable of carrying the larger missile, an even more expensive proposition. The Tomahawk cruise missile, widely deployed on our ships and submarines, has the range and accuracy required to meet today's threat.

SSGN

Senator **Quayle**. Given the clear invulnerability advantages of submarine-launched SLCMs and the virtual proliferation advantages such hard to detect basing affords, has the Navy any plans to follow the Soviets example and deploy not just more SLCMs on our submarines but a fully dedicated cruise-missile submarine?

Admiral **Watkins**. The U.S. Navy has no plans to design a dedicated cruise-missile submarine. Concept studies for a new design attack submarine clearly indicate the need for a multi-purpose attack submarine. This need is driven by our maritime strategy which requires that our attack submarine go forward immediately into Soviet controlled waters. Once there, our limited numbers of ships must be sustainable for long durations while executing a full range of missions. Among these missions is the strike mission against land targets. We do not have the assets to build a class of limited capability SSGNs along with the essential new multi-purpose attack submarine needed to counter the Soviet threat. The need for strike capable attack submarines was a major factor in the increased firepower designed into the SSN-21 and improved SSN-688. We have introduced strike capability while maintaining the potent force of the attack submarine. The Soviets have reasons to build capable SSGNs which are drivers in their maritime strategy. They have a need to counter our high value carriers with survivable mobile SLCM platforms. The SSGN is logical. We do not have a similar driver in our maritime strategy.

TOMAHAWK ON AIRCRAFT

Senator **Quayle**. It is my understanding that the Navy currently has no long range air-launched cruise missiles (Harpoon being relatively short in range). Is it impossible for Navy aircraft (sea or land based) to carry the Tomahawk? Are there any plans to attempt this? If not, why not?

Admiral **Watkins**. We have employed successfully specially configured shore based A-6 aircraft to carry and launch Tomahawk cruise missiles as part of the test and evaluation program attendant to missile development. However, landing weight restrictions for current carrier based aircraft and the present missile size restrict our capability to employ Tomahawk from aircraft carriers. Such employment is technically feasible; but some engineering modifications would be required. A down sized Tomahawk, the Medium Range Air to Surface Missile (MRASM), was in development to provide a long range anti-ship and land attack capability for carrier based strike aircraft. An A-6 aircraft carrying MRASM operated successfully from the USS *Kittyhawk* (CV-63) during the evaluation of this weapon. This program was terminated in FY-84 with the concurrence of Congress because other weapons available and in development better met the requirement. While it might be possible for land based aircraft (such as the P-3) to be modified to carry Tomahawk there is no requirement for a land attack capability for maritime patrol aircraft. Their ability to carry Tomahawk anti-ship missiles (TASM) would be limited by their load carrying capability and would be tactically restrictive. There are no plans to include a capability to carry tactical Tomahawk missiles in any current or planned Navy aircraft.

CHEMICAL WEAPONS

Senator **Quayle**. How much of a threat do Soviet chemical weapons pose to our fleet and ports? Is there any reason to fear Soviet use of [deleted] to deliver chemical or biological munitions against our naval assets? If so, how well could the Navy defeat or cope with such a threat?

Admiral **Watkins**. The Navy has acknowledged the chemical warfare threat to all naval forces as valid. The Soviets have developed a variety of weapon systems [deleted], capable of delivering chemical or biological agents against our naval assets. With increasing Soviet capabilities in delivery of precision guided munitions and threat continues to increase. While our carrier battle group susceptibility to chemical or biological attack remains lower than that of fixed facilities or land-based forces because of greater mobility, [deleted].

The ability of the Navy to defeat or cope with a Soviet [deleted] attack employing lethal chemical agents is very scenario dependent. It is a function of the unit or facility attacked, the mission being performed, the chemical agents and concentrations employed, the frequency of re-attacks and the environment. The most easily targeted naval assets for chemical attack are those such as ports and unloading docks, repair and supply facilities, Naval Air Stations, or any other facilities that require large numbers of exposed personnel to carry out the mission. In general, overseas naval shore facilities have [deleted] in an environment chemically contaminated to levels the Soviets are capable of producing.

I believe the best way to deal with this threat is to reestablish a credible U.S. chemical deterrent. Without a retaliatory capability, the enemy gains the tactical advantage of holding at chemical risk our entire force while exposing his own to little risk. No matter how good our defensive equipment, we will always be at a disadvantage if we must face an enemy not equally degraded by chemically defensive posture and the associated logistics burdens. A credible chemical retaliatory capability is essential to first deter the use of such weapons and, if we fail in that, to control or limit the conflict. Without a credible chemical retaliatory capability, we are forced to rely on a threatened nuclear response to deter an enemy's use of chemicals.

I would like to remind you that during World War II Germany maintained extensive chemical warfare stockpiles that were never employed. The allies made clear their policy of retaliation in kind and maintained the capability to do so.

SDI

Senator **Quayle**. If the United States was able to defeat Soviet SLBMs both in their boost phase and in their terminal reentry, what effect would this have on Soviet nuclear strategy and on the menu of tasks (Soviet threats) the U.S. Navy would have to cope with? Would it free up U.S. Naval forces for other tasks? If so, what naval assets would be freed up and reassigned to what tasks.

Admiral **Watkins**. As the President has made clear, the Strategic Defense Initiative in no way reduces the need to continue the rearming of America. Regardless of hypothetical changes in future Soviet nuclear strategy, the United States Navy must deal with the entire Soviet naval threat in an integrated manner. We do not procure or operate forces solely to deal with any one specific Soviet Navy component. Thus decreased Soviet dependence on sea-based ballistic missiles would not necessarily reduce U.S. Navy requirements. Indeed, the converse might be true. Under present Soviet strategy, substantial portions of their Navy will probably be concentrated in wartime to protect ballistic missile submarines. Should these forces disperse as a result of lessened emphasis on protecting ballistic missile forces, our requirements would increase, not decrease. This reinforces the need for a balanced Navy capable of meeting future Soviet challenges no matter how they elect to employ their forces.

Questions Submitted by Senator Pete Wilson

REPORT ON DIESEL SUBMARINES

Senator **Wilson**. Last year, this committee directed the Defense Department to complete a report on the procedures by which diesel submarines could be built by U.S. shipbuilders for our allies. I'm told the Navy has been assigned responsibility for preparing this report, which is now more than three months overdue. When can we expect to receive this report?

Secretary **Lehman**. We are at work now to prepare a thorough answer to this complex issue. As you know the report is to describe what procedures could prevent the compromise of sensitive U.S. submarine technology as well as procedures required to permit building diesel submarines for our allies. Presently, the report is being staffed through the Naval Sea Systems Command and I anticipate delivery of the report to the Secretary of Defense by the end of March, 1985.

SSBN DISMANTLEMENT

Senator **Wilson**. In your view, is it prudent for the U.S. to be dismantling survivable ballistic missile submarines in the face of expanding Soviet ballistic missile defenses—including actual violations of the 1972 ABM Treaty?

Secretary **Lehman**. Our policy of not undercutting existing arms control agreements, even those which have expired or have not been ratified, was established to serve on an interim basis to promote a positive atmosphere for continued arms control negotiations. In compliance with out national policy the Navy has been dismantling the requisite number of U.S. strategic weapons systems—submarines and ICBMs—as newer systems have been added.

Questions Submitted by Senator Sam Nunn

MINE WARFARE

Senator **Nunn**. Do you need our allies to do more to contribute to neutralizing the significant mine threat that exists from the Warsaw Pact and other potential adversaries (i.e., Libya, Vietnam, Cuba, North Korea and others)?

Secretary **Lehman**. Yes. Although many of our allies are making substantial improvements in their Mine Countermeasures (MCM) capabilities, Mine Warfare is an area which requires us to continuously encourage our allies to improve their programs. For many years we have used our Navy-to-Navy staff policy talks as a forum to stress the importance of Mine Warfare and help our allies build their programs.

Our Commander, Mine Warfare Command annually visits each of our allies and friends to keep abreast of improvements and provide assistance as required. Through these visits, as well as NATO Mine Warfare conferences, we have been encouraging our NATO allies to develop a deep water MCM capability to counter the new generations of deep water mines targeted primarily against our submarines.

The recent mining of the Gulf of Suez and Red Sea has renewed everyone's interest in Mine Warfare. This renewed interest should accrue to our overall effort to encourage our allies to build and maintain adequate MCM Forces. Australia, Japan and our NATO allies have excellent MCM procurement programs in progress to help counter expected mining threats. We will continue to work closely with our allies and friends to ensure that adequate numbers of MCM forces are available whenever needed.

Senator **Nunn**. Admiral Watkins, what were the lessons learned this last summer in our efforts to sweep the Red Sea of mines?

Admiral **Watkins**. We were able to actually demonstrate our ability to rapidly deploy AMCM assets to a region where land based support was either very limited or non existent. We also proved that in a contingency situation we could perform an extensive mine hunting mission as part of a coordinated Allied effort. In carrying out this mission it was clear that sea based AMCM forces are the only real option when U.S. support facilities are not available. There is no doubt that mine hunting efforts would have been enhanced if we had an AMCM might towing capability. Also, the need for underwater Remote Operated Vehicles (ROV) to perform the deep water positive identification of mine-like contacts became apparent during the course of events, as did the need for more reliable precise navigation equipment. The development of these improved surveillance and navigation systems are well underway and will start fleet introduction in the near future. We confirmed once again that both air and surface mine countermeasures forces must complement each other. Neither can accomplish the total mission alone.

SECURITY

Senator NUNN. General Kelley, since last year, I assume that the Marine Corps has implemented a number of changes to improve security procedures at forward deployment areas and at our embassies. General Kelley, would you discuss this please?

General KELLEY. The Marine Corps has implemented a comprehensive program to combat terrorism and to upgrade security for its installations and operational units, to include those units that are forward deployed. During the last year over 50 actions were initiated Corpswide in accordance with a plan that provides the framework for the program. The attached paper provides a brief outline description of the Marine Corps Program to Combat Terrorism and contains examples of the actions undertaken to improve security.

In addition to participating in the applicable portions of the overall USMC program, the Marine Security Guard (MSG) Battalion that provides internal security for our overseas diplomatic posts has undergone several specific enhancements. The rank of the Battalion's Company Commanders has been increased to gain additional experience and expertise in these critical billets. The training of the MSG personnel has been improved and increased both at the entry level and in the daily training required. Joint coordination and planning between Headquarters Marine Corps and the Department of State have been effected at the working level in order to:

—Review and update the Memorandum of Understanding.

—Identify and accurately program necessary manpower increases.

—Develop criteria for jointly reviewing and evaluating current and new physical security standards.

—Improve interagency coordination on intelligence information.

At the policymaking level, Lieutenant General D'Wayne Gray, Chief of Staff, Headquarters, U.S. Marine Corps, has been designated as a member of the Department of State Advisory Panel on Security of U.S. Missions Abroad.

USMC PROGRAMS TO COMBAT TERRORISM

1. The USMC program is based on a plan approved by the Commandant of the Maine Corps. Program objectives are listed in paragraph 2. These are achieved by numerous actions that are completed or ongoing. Each action falls under one of the seven areas/categories into which the program is divided. Paragraph 3 describes the seven program areas and gives representative examples of the actions initiated within each area.

2. The objectives of the program are to:

a. Have every Marine thoroughly aware of the threat.

b. Provide realistic and complete training and education on how to counter the threat.

c. Provide the doctrine, tactics, and equipment necessary to counter the threat.

d. Provide commanders with timely, accurate intelligence concerning terrorist activities.

e. Establish the level of security required to deter terrorist attacks against USMC installations, facilities, and deployed units.

f. Maintain centralized control and coordination to ensure consistency in program actions.

g. Provide for the continuous assessment of the threat and USMC capabilities to defeat it.

3. The seven program areas and example actions are:

a. Monitoring and Coordination:

(1) Overall cognizance of the USMC program given to the Deputy Chief of Staff for Plans, Policies and Operations (DC/S, PP&O).

(2) Commanders directed to assign primary staff cognizance to the unit/installation operations officer.

(3) Creation of a Special Operations and Terrorism Counteraction Section to coordinate program for DC/S, PP&O.

(4) Creation of a Headquarter, U.S. Marine Corps Working Group for Measures to Combat Terrorism with each staff agency represented.

b. Study of Threat and Capabilities to Combat the Threat:

(1) CMC directed review of threat and USMC capabilities be conducted by the Marine Corps Development and Education Command.

(2) Several field studies conducted for operational forces' view and recommendations.

(3) Reserve Symposium conducted by selected USMC reservists with unique expertise resulting from civilian positions such as those in civilian law enforcement.

(4) Current ongoing study on security for rear areas during conflict.

c. Intelligence:

(1) Creation of a Terrorist Threat Section within USMC Intelligence Division to analyze threat to USMC facilities and personnel, to provide on-site intelligence assistance as required, to produce intelligence reports, to represent USMC on committees/groups regarding terrorism, etc.

(2) Development of a Marine-specific report called a Terrorist Information Report (TIR) that provides Marine commanders with information on terrorist trends, recent national level initiatives and possible preventive measures.

d. Physical Security:

(1) CMC directed a review of security requirements by each USMC installation to determine needed improvements/enhancements.

(2) USMC currently upgrading security of all arms, ammunition and explosives facilities.

(3) Headquarters, U.S. Marine Corps publishing a new Marine Corps Order—"Physical Security and Crime Prevention Manual."

(4) Enhancements to Military Police training.

(5) Acquisition of explosives detection dogs and physical security equipment.

e. Education and Training:

(1) Instruction provided on threat and combatting threat in USMC formal schools and recruit depots.

(2) Increase in quotas to formal school courses on subject of terrorism.

(3) Use of Mobile Training Teams (internal and external to USMC).

(4) Creation of individual training standards for combatting terrorism.

(5) Production of training aids (films, videotapes, wargames, etc.)

(6) Production of correspondence courses.

f. Doctrine Development:

(1) Published Marine Corps Order on Combatting Terrorism to establish CMC policy and guidance to commanders.

(2) Published an Operational Handbook on Terrorism Counteraction for commanders, staffs, and small-unit leaders (OH 7—14 "Terrorism Counteraction").

(3) Publishing troop guides on numerous "How-to-Fight" tactics/techniques.

(4) Publishing Unit Operational Standards for Combatting Terrorism for the Marine Corps Combat Readiness and Evaluation System (MCCRES).

g. Operational Capability:

(1) Review of Marine security forces training, employment, procedures, etc.

(2) Creation of security survey teams and security equipment packages to augment operational units/installations as required.

SEALIFT

Senator NUNN. How would you characterize the health of our current sealift capability?

Secretary LEHMAN. Our current sealift capability is healthier than in previous years and is steadily improving. It should be noted, however, that the various programs to improve sealift capability, such as the buildup of the Ready Reserve Force (RRF) and the procurement of enhancement features like sea sheds and flat racks, are only treating the symptoms and not the disease. The underlying causes of the unhealthy state of the United State Merchant Marine Industry must still be treated.

Senator NUNN. Are our assigned military sealift platforms and those merchant marine assets that we would use in time of war sufficient to implement the rapid reinforcement of Europe, given our needs that cannot be filled by airlift assets?

Secretary **Lehman**. Generally, yes. Airlift will move most of the personnel but only a small portion of the cargo needed in such a reinforcement. Our sealift requirement is scenario dependent. However, by using all available U.S. flag and NATO shipping, with sufficient advance warning, we will be able to deliver unit equipment to Europe on time.

Senator **Nunn**. Can we meet our military sealift needs and still meet economic sealift requirements?

Secretary **Lehman**. The United States does not meet its peacetime carriage needs using only U.S. flag ships now. Only six percent of our peacetime international trade moves in U.S. flag shipping. We are charged with the mission of providing a military sealift capability in time of war and our programs are aimed at doing that. The program does not attempt to meet economic shipping needs in either peacetime or wartime. Since all militarily useful dry cargo ships would be requisitioned to meet military needs in time of war, economic shipping requirements would depend, almost entirely, on the availability of foreign flag ships.

SLBM LAUNCHER TUBE QUANTITIES

Senator **Nunn**. Secretary Weinberger indicated in his posture statement that our current *Ohio* class building rate of one submarine per year would continue in the future. Given that our *Lafayette/Ben Franklin* class Poseidon C-3 and Trident C-4 boats will be approaching the thirty year block obsolescence point between 1993 and 1997, will we have sufficient SLBM launch tubes with our current *Ohio* class construction schedule between 1993 and 1997? (If not, what will the overhaul costs be to keep enough of the older submarines (*Lafayette/Ben Franklin*) beyond the thirty year limit?)

Secretary **Lehman**. The necessary strategic force structure is a matter of national policy. We believe that the Navy's strategic program will provide adequate forces to meet national requirements. The introduction of the Trident II (D-5) missile and the Trident submarine will provide a significantly more capable weapon system compared to the existing Poseidon force. At the introduction rate of one Trident per year, we will have a force of about twenty Tridents equipped with D-5 by the turn of the century, when all Poseidons will have been decommissioned. The Poseidon retirement schedule and Trident building rate will provide sufficient launchers during the 1993-1997 period.

MINE WARFARE

Senator **Nunn**. I applaud the fact that the Navy is acquiring minesweeping and minehunting ships of the *Avenger* and *Cardinal* classes. I also am pleased that the Navy plans to acquire more mine-countermeasures helicopters. Will these new acquisition programs, along with our current assets, meet all of our mine-countermeasures requirements worldwide?

Admiral **Watkins**. The force levels to which we are building comply with today's requirements in support of our worldwide maritime strategy, but whether or not these same assets will satisfy our long term needs is yet to be determined. A comprehensive study has been initiated to establish mine warfare force level requirements of the 1995-2005 time frame. The results of the study will be known within the year.

FUTURE THREAT

Senator **Nunn**. Admiral Watkins, if you had to choose one area of naval warfare that you see as the biggest challenge in the future, would that be on the surface, in the skies or under the seas?

Admiral **Watkins**. Senator, I would have to respond that the biggest challenge in the future will be under the seas. A primary requirement for successfully executing our Maritime Strategy is our ability to detect and destroy Soviet submarines, both in forward areas where our submarines will operate, and in the areas surrounding the carrier battle groups. In the past ten years, the Soviets have made truly impressive strides in the quality of their submarine force:

First, their submarines are becoming progressively quieter.

Second, they have deployed on their submarines an impressive array of weapons with vastly increased standoff ranges.

Finally, their submarines are becoming more survivable.

Beyond that emphasis on the need to keep our technical edge in antisubmarine warfare, Senator Nunn, I must emphasize that it is the full and balanced spectrum of capabilities which we must address. We cannot focus on just one mission area as to where the principle threat lies. Soviet capabilities are broad, and we must be prepared to counter them all.

USN-USAF MEMORANDA OF AGREEMENT (MOA)

Senator **Nunn**. In September 1982, the Navy and Air Force began a program of coordinating mission activities in selected areas such as anti-air warfare, anti-surface warfare, indications and warning, surveillance and targeting, command/control and communications, aerial minelaying and aerial refueling. Would you outline for us the joint Air Force/Navy operations that took place last year and what these operations entailed? What joint exercises along these lines were conducted last year and what are planned for this year?

Admiral **Watkins**. The USN-USAF Memoranda of Agreement (MOA) signed in September and October of 1982 represent a concerted effort to maximize deterrence and warfighting capabilities through optimal inter-action of service forces. Since the signing of these over arching agreements, several functional MOAs have been signed including: B-52 delivery of sea mines, Air Force refueling support, B-52 delivery of Harpoon, cooperation of EO/IR and RPV technology, and communication support.

In 1984, USN/USAF assets jointly played in 65 of 111 JCS directed or coordinated exercise. While recognizing that many of these exercises involved opposing force operations and small scale insertions, our primary goal was and continues to be to develop, exercise, and assess joint force operations.

Some prime examples of highly beneficial exercise play are: DISPLAY DETERMINATION (17 Sep-15 Oct 84) which demonstrated NATO's capability to defend and reinforce the southern region, OCEAN VENTURE 84 (29 Apr-5 May 84) which was designed to control the maritime environment in the Caribbean and to develop USN/USAF interoperability in SLOC defense, READIEX 2-84 (22 Aug-13 Sep 84), a COMSECONDFLT sponsored SLOC defense exercise in the Western Atlantic, RED FLAG (five times a year), combat training for tactical aircrews, COPE THUNDER (seven times a year), a joint conventional air employment exercise in the Philippines, and SEABAT (four times a year), an exercise which focused on intercept problems in an EW environment.

TEAM WORK 84 (28 Feb-22 Mar 84) is a specific example of a large scale maritime exercise where USAF forces played a broad and important part. The exercise tested NATO plans for reinforcement of northern Norway, and culminated in a night amphib assault in the TRAMSO Region. USAF participation included: RF-4C and F-111 orange air forces, F-15s forward deployed to Bodo to intercept real-world red air, E-3A AWACS for fleet defense, KC-135 (orange) and RC-135 (blue/real-world), B-52 (Busy Observer) for sea surveillance, and KC-10 and KC-135 tankers supporting Navy TACAIR. 126 total USAF sorties were flown in support of Navy during this exercise.

Another, more recent, example of joint USN-USAF MOA in action was FLEETEX-85 (18 Oct-17 Dec 84). This exercise was designed to train our forces in the execution of Pacific Command wartime campaign plans. It stressed the importance of coordinated operations and interoperability between Air Force and Navy units, and successfully integrated U.S. Air Force units into carrier battle group operations. AWACS aircraft and KC-135 tanker aircraft participated fully in battle force air defenses. AWACS provided the warfare commander with threat direction, a solid tactical link, timely threat warning and excellent communication. The fuel support provided by Air Force tankers allowed the battle force to sustain air defense grid operations during long periods of heightened air threat. Additionally, the availability of as many as 40 F-15s on a given day to play the role of air aggressors provided a high degree of realism to the exercise air battle.

While FLEETEX-85 highlighted USPACOM USN-USAF coordinated operations, the same emphasis is apparent in all theaters. USCINCLANT exercise NORTHERN WEDDING 86 planning includes SAC participation in the surface surveillance and mining support roles, and U.S. Air Force Europe's TACAIR in anti- air/counter-air warfare support missions. This is only one example of growing cooperation between the two Services. There are many exercises in 1985, just as last year, where we can and will improve joint warfighting.

In summary, USN-USAF interoperability is a key factor in joint/combined training exercises and CINC campaign planning for global war and contingency operations. We continue to explore new opportunities to enhance warfighting capability through our MOA Flag Steering Group and integrated fleet exercises and wargames.

GRENADA LESSONS LEARNED

Senator NUNN. Could you enumerate for us the three or four most important lessons learned from the Navy's participation in the Grenada operation?

Admiral WATKINS. Shortly after the Grenada operations, the Secretary of the Navy directed the Department of the Navy to review the results of Operation URGENT FURY and develop "Lessons Learned" which would be useful in improving the capabilities of Navy and ~~Marines~~ Corps forces. This study, concluded on April 16, 1984, identified five essential lessons.

The U.S. Navy and Marine Corps are well prepared and properly structured to carry out URGENT FURY type operations on short notice if an amphibious ready group with Marines embarked is available.

Given an enemy situation similar to that encountered on Grenada, U.S. Navy and Marine Corps forces can be extremely successful on a very short notice/quick reaction basis, but success against a more capable enemy in prepared defenses would require additional time for more thorough and detailed planning and coordination, as well as a more deliberate time phased execution of a fully developed attack plan.

Command and control communications capability in the Navy requires careful review, with emphasis on joint force interoperability, time phasing of new systems aboard ship, and increasing reliance on the use of satellites.

Overall intelligence support for URGENT FURY was adequate to the task, however some aspects of intelligence support to tactical commanders were less than adequate. In particular, the lack of Human Intelligence (HUMINT) and unavailability of tactical maps were particularly serious shortcomings. URGENT FURY highlighted the lack of adequate intelligence in potential Third World trouble spots where U.S. forces might be committed.

Very tight Operational Security (OPSEC) can be successfully maintained but may require that broad based, thorough planning and coordination be sacrificed.

ANTI-SUBMARINE WARFARE

Senator NUNN. How would you characterize the pace of the U.S. improvements in ASW technology? Navy briefings to the staff indicate that Soviet submarines are becoming much quieter and simultaneously, that Soviet ASW sensors (passive, sonars, sonobuoys, acoustic processors) are becoming better equipped to find and track submarines. Do you foresee current U.S. ballistic missile and attack submarines becoming vulnerable to detection and potential attack in the near future? How survivable are our older submarines such as the *Permit* class SSN's and early *Lafayette* class SSBN's?

Admiral WATKINS. Before discussing ASW technology, let me first state that I do not foresee our current U.S. ballistic missile and attack submarines becoming vulnerable to detection and attack in the near future. And, if we sustain our ASW R&D and shipbuilding programs, I do not foresee that vulnerability in the longer term.

U.S. improvements in ASW technology have kept pace with the state of the art in sensor performance and signal processing. As a result, we have maintained an advantage over the Soviets in ASW. As we observe the Soviet submarines becoming quieter and more capable, we are pushing our ASW programs to maintain our advantage.

Improvements to enhance the survivability of U.S. ballistic missile and attack submarines are continually being developed and implemented. These submarines, which include *Permit*, *Lafayette* and new classes, are more capable today than when they were built. We are confident that the survivability of our *Lafayette* and *Permit* class submarines remains more than sufficient to fulfill their assigned missions.

Senator NUNN. Is the primary emphasis of U.S. ASW RDT&E in the acoustic area or non-acoustic ASW? What percentage of our efforts are currently geared toward non-acoustics?

Secretary LEHMAN. The primary emphasis of U.S. ASW RDT&E in sensor systems continues to be in the acoustic area. Approximately four percent of the total fiscal year 1986 Navy request for ASW RDT&E is devoted to non-acoustic detection means.

OVERHEAD CHARGES

Senator NUNN. Mr. Secretary, on Monday of this week, Secretary Weinberger stated in his testimony that contractor overhead costs "make up one-third of the price charged by prime contractors for weapons systems." The Navy has more major production lines or programs than the other two services combined (50 for the Navy compared to 42 for the other two services). The Navy has 17 aircraft production lines or programs alone.

Do you agree with the Secretary's estimate? Is the Navy devoting too much of its available resources to contractor overhead because of the law rates of production for Navy programs?

Secretary **Lehman**. We agree with the Secretary's estimate. Overhead costs are not completely related to production as your question indicates. Overhead normally includes all employee fringe benefits, state and local taxes, depreciation on facilities and similar charges. Some of these increase with more production and some are merely amortized over more units.

Senator **Nunn**. Mr. Secretary, you have made great strides in making the Navy a better businessman. Yet there continue to be a very high number of production lines and very low production rates in the Navy, especially in the area of Navy aircraft programs. How can we reduce the amount of Navy resources going to non-productive overhead and increase production rates, within realistic budget constraints?

Secretary **Lehman**. More thorough overhead cost reviews by the Defense Contract Audit Service and the Defense Contract Audit Agency and increased overhead "should-cost" reviews can serve to reduce the non-productive charges. Furthermore, our competition initiatives, coupled with tight configuration and change controls and contract discipline, such as fixed price contracts, bring down and overall cost of weapon systems for both overhead and production. The key to success in stabilizing aircraft and other Navy program production rates is not just in reducing overhead by in controlling the total cost to the government. The acquisition strategies we have adopted are accomplishing that objective.

REAL GROWTH NEEDED TO SUSTAIN NAVY PROGRAM

Senator **Nunn**. Last year I asked you how much real growth was required in order to sustain the Navy's modernization and expansion plans. You indicated that 12.7 percent was needed in fiscal year 1985 and 9.2 percent in 1986. Last year you received something closer to 4 percent and this year it is doubtful you will get that much.

Given that you required those levels of increase last year, is the Navy's modernization and expansion program still on course?

Admiral **Watkins**. The President's Budget includes real growth of 6.5 percent in fiscal year 1985 and 4.5 percent in fiscal year 1986 for the Department of the Navy. This reduction in growth has forced us to cutback somewhat on our efforts, but even with these adjustments, our program to expand and modernize our forces is essentially still on course. We are buying more program with the dollars provided us through careful rebalancing of resources, better economic conditions, i.e., lower inflation, and reduced costs resulting from management improvements. These management efficiencies include increasing the number of contracts awarded competitively and those awarded on a fixed price incentive basis, multi-year procurement, and independent cost estimating. While these factors have permitted us to stay on track, any further reductions in fiscal year 1986 would jeopardize achievement of our objectives.

Senator **Nunn**. What real growth is needed and currently planned in the fiscal year DP for the Navy?

Admiral **Watkins**. The Navy's requirements are not based on real growth needs, but rather on an assessment of the threat and a determination, within a fiscally constrained dollar amount, of the most optimum balance of resources needed to counter that threat. This process resulted in real growth of 4.5 percent in fiscal year 1986 for the Department of the Navy. The projected resources planned for the DOD during the fiscal year DP years will allow the necessary manpower and dollars to be allocated to Navy to carry out our programs.

Senator **Nunn**. Mr. Secretary, this year the Navy has slipped production rates on 11 major systems or production lines. For each of these, how much greater is the unit cost than it would be if the systems were bought at their previously-projected rates? What are the savings you get from those programs where you have increased the production rates?

Secretary **Lehman**. [Information not received in time for printing.]

Senator **Nunn**. Mr. Secretary, how many programs and which programs in your request are being produced at maximum efficient economic production rates? How many and which are being produced at the minimum economic production rate? How many and which are being produced below the minimum efficient economic production rate?

Secretary LEHMAN. [Information not received in time for printing.]

Senator NUNN. Secretary Lehman, you have testified this morning that the Navy has grown from a 479-ship Navy when President Reagan was first inaugurated to 530 ships today and to a projected 545 by the end of the current fiscal year. How many of these ships were funded prior to the Reagan Administration? Can you tell us how these increases of 51 and 66 ships were calculated?

Secretary LEHMAN. [Information not received in time for printing.]

LAW OF WAR

Senator NUNN. I have asked you in years past about the performance of Reserve units that have unique roles in supporting the Active forces. What has been the performance history of the HQMC Law of War Reserve Augmentation Unit in this respect in the past few years?

General KELLEY. The Reserve Augmentation Unit (RAU) supporting the Training Department, Headquarters, Marine Corps (HQMC) is under the operational control of the Deputy Chief of Staff for Training and provides a Mobile Training Team (MTT) for the conduct of Law of War training throughout the Marine Corps during pre- and post-mobilization. Team members are assigned to individual mobilization augmentee billets within the Training Department's wartime table of organization.

The Marine Corps Law of War Course, which the MTT has developed and taught, has been presented 15 times since May 1981. The course has been presented to 460 military officers and civilians: 333 Marine Corps air, ground, and judge advocate officers; 124 Navy legal officers; and three civilians from the Department of Defense and the International Committee of the Red Cross. Forty percent of the qualified Marine Corps judge advocates currently on active duty have taken this course. This one-week course has been given at the Naval War College, the Marine Corps Development and Education Command, Landing Force Training Command Pacific, and Camp Pendleton, California.

In addition, MTT members have briefed U.S. military officers on the Law of War at the Marine Corps Command and Staff College, the Armed Forces Staff College, the Marine Corps Amphibious Warfare School, Advanced Communications Officers School, the Marine Corps Staff Noncommissioned Officer Academy, and the Armed Forces Air Intelligence Training Center (Senior Officer Targeting Course), Air University, Canadian Forces Staff College, and the Combat Casualty Care Course of the U.S. Army Academy of Health Sciences.

Senator NUNN. Does this unit continue to support both Active and Reserve forces and what is the nature of their contribution?

General KELLEY. The HQMC Law of War Mobile Training Team (MTT) has continued to respond dynamically and effectively to support both Active and Reserve forces. This support ha been primarily through the expansion and improvement of the Marine Corps Law of War program. While the principal objective of the Maine Corps Law of War program is the training of Active forces, opportunities have always been provided for Reserve officers to attend the course as well, and numerous Reserve officers over the years have taken advantage of these opportunities. In 1984, four of the colonels who attended one of our courses were Reservists. The MTT now has a liaison officer with the Judge Advocate Division who is responsible for coordinating the participation of Reserve judge advocates. More recently, the Commanding General of the 4th Marine Division published a message soliciting nominations from field grade Reserve officers in command and staff billets for attendance at future Law of War course. This expansion of training opportunities for Reserve officers is illustrative of the HQMC Law of War MTT's contribution and serves as an excellent example of the Marine Corps' commitment to the Total Force concept.

Senator **Nunn**. What are the qualifications of the personnel in this unit that allow them to contribute in this fashion and is this a good role for the Reserve forces?

General **Kelley**. The members of the HQMC Law of War Mobile Training Team (MTT) represent a unique group of Marine Reserve officers who are exceptionally well-suited for their mission. Most of the officers are combat veterans of the Vietnam Conflict who have served in command billets. Many are attorneys who possess appropriate graduate degrees and are highly specialized instructors in the Law of War.

Their civilian occupations range from senior partners in law firms to representatives of the Executive and Legislative branches of the Federal Government. This unit also has members with significant experience in international law, who, in their civilian employment, provide day-to-day advice on operational issues to the Armed Forces; have served on U.S. delegations to international conferences and negotiations; and are widely published in international law and Law of War professional journals.

The Marine Corps Law of War program is considered entirely appropriate for involvement by Marine Corps Reserve personnel. Their expertise has more than supplemented that available in the active duty Marine Corps and is an excellent example of the strong relationship between the Marine Corps Reserve and the Regular Establishment.

Senator **Nunn**. What progress has occurred in the Marine Corps Law of War program and how would you rate it as compared to other service programs?

General **Kelley**. The Marine Corps Law of War program has matured into a one-week, full-scale formal course of instruction aimed at all Marine Corps commanders and principal staff officers at the battalion and squadron levels as well as our judge advocates. The one-week formal course is presented four times yearly by our Law of War experts of the Training Department Reserve Augmentation Unit and is highly regarded throughout our Corps. The program has grown to include production of a Law of War training film, drafting of educational materials for other Marine Corps training functions, review of doctrinal documents and orders, and periodic presentation of Law of War instruction at Marine Corps formal schools such as the Command and Staff College, the Amphibious Warfare School, the Communications Officers School and the Staff Noncommissioned Officer Academy. Our Law of War instructor personnel cooperate closely with the other services and enjoy a close working relationship with the Law of War experts of the Army, Navy, and Air Force. The Marine Corps Law of War program has made significant progress since its inception in 1981 and compares very favorably with those of our sister services.

Senator **Nunn**. What is the emphasis in terms of the personnel receiving the training—are you emphasizing training of both command and support personnel or legal personnel or what?

General **Kelley**. The Law of War is a command responsibility which cannot be delegated by a commander to his staff or to military lawyers. For this reason the Marine Corps has two principal lines of emphasis in its Law of War program.

Our principal target audience consists of the commanders of Marine Corps battalions and squadrons and their principal operational staff members. These individuals command or serve in units that represent the cutting edge of Marine Corps combat power and, therefore, have the greatest responsibility for compliance with the Law of War.

Two of our four annual courses are directed each year toward Marine Corps judge advocates. They require technical legal training in all areas of military law a part of their military occupational specialty in order that they may fulfill their duties as principal Law of War advisors to Marine Corps commanders

Senator **Nunn**. How would you rate the performance of the HQMC Law of War Reserve Augmentation Unit (RAU) in accomplishing their mission?

General **Kelley**. The Training Department RAU operates under the operational control of the Deputy Chief of Staff for Training, Headquarters, U.S. Marine Corps, and provides a Mobile Training Team (MTT) whose performance over the past years has been superb. Its mission has been to support the development, implementation, and conduct of the Marine Corps Law of War program.

The team has taken the lead to create a Law of War program which, after four years, reaches every corner of the active duty Marine Corps. Members of the RAU instruct on the Law of War at virtually every Marine Corps officer and enlisted formal school, and many other service schools. The most important contribution of the RAU has been its comprehensive one-week course of instruction on the Law of War which has been presented to over 450 Marine Corps and other military officers.

This team, to an unusual degree among Reserve units, has integrated its mission performance to meet the current needs of the active duty Marine Corps. The MTT's product is extremely effective. The unit is well-led, and the overall performance has been commendable.

Senator **Nunn**. What was the reason this unit was converted from a volunteer status to a reserve augmentation unit?

General **Kelley**. Three levels of Law of War training have been developed to ensure Active and Reserve Marines have acquired and maintain the knowledge commensurate with their duties and responsibilities. These training requirements will intensify greatly upon mobilization.

The level of expertise required to develop, prepare, execute, and evaluate Law of War training exercises and training programs is significant. Detailed expertise in international law, international treaties and customs, prisoner of war matters, civil law, civilian property, and other complex variables is required.

Accordingly, the Training Department at Headquarters Marine Corps initially established a Mobilization Training Unit (MTU) to draw upon the military and civilian law of war expertise in the Marine Corps Reserve. Participation was voluntary.

Further analysis of the Law of War training requirement, however, indicated that Law of War instructors constituted critical wartime billets that necessitated assignment of personnel immediately to Individual Mobilization Augmentee (IMA) billets to ensure the availability of individuals who could be deployed between M-Day and M+10 as members of Mobile Training Teams, where needed, and with the requisite Law of War skills and expertise.

Law of War IMA's assigned to the Training Department Reserve Augmentation Unit (RAU) are required to attend 48 scheduled drills and 14 days of active duty annually. Previous MTU participation was limited to 48 drills and occasional periods of active duty contingent upon available funding.

Questions Submitted by Senator Carl Levin

PAY AND BENEFITS

Senator **Levin**. Secretary Lehman and Admiral Watkins, you occupy a fair part of your statement discussing how improved personnel recruiting and retention is the major reason for the Navy's greatly increased overall readiness in the past five years. You also say that warning signs are on the horizon for the future—a large decline in new contracts for the delayed entry pool of recruits; increased resignations among critical officer skills, esp. pilots; the first signs of enlisted personnel seeking better pay in the civilian world.

You discuss the erosion of pay purchasing power as a major reason for some of these warning signs and urge us to support the DOD pay raise request.

You also urge us to ensure that "military basic pay remains comparable with the private sector."

Since the DOD pay raise request still means that military pay would lag behind comparable civilian job pay by the largest amounts in 11 years according to DOD figures—13.4% by the Professional, Administrative, Technical and Clerical (PATC) Index and 9.6% in the Employee Cost Index, aren't we going see further personnel problems in the future?

Secretary **Lehman**. It is true that the DOD pay raise request still means that military pay would lag behind comparable civilian job pay. That is why it is so important that other elements of military compensation achieve their intended purposes. Your strong support will be needed to maintain the integrity and stability of the present military retirement system, to provide full funding for travel reimbursements, to provide full funding for special and incentive pays, and to provide the requested funding for bonus programs. All of these items make up our total compensation package which must remain competitive with the private sector. If pay comparability is not maintained, then the primary means to maintain a competitive package is the use of bonuses. In the long term, if career people perceive a reduced commitment from the Federal Government, such as results on our long-standing retirement system, we will be unable to maintain required career retention rates and, therefore, will suffer reduced readiness.

Senator **Levin**. Do you agree with the following statement: "No matter how good the strategy or excellent the equipment, good soldiers, sailors, airmen and marines remain the heart of our defense forces" (Gen. Vessey, (2/4/85) to SASC) and: "our military people . . . constitute the true core of our military capability across all missions and regions." (Secy. Weinberger, Sept., 1981, to Congress).

Secretary **Lehman**. I could not agree more, personnel is our number one priority. That is why I am very concerned over the reversing retention trends we are starting to experience. The compensation initiatives included in the FY-86 budget will enable us, with full funding, to stem these negative trends.

Senator **Levin**. Would you agree that maintaining military pay scales so they remain comparable with civilian salaries is an essential and key ingredient to maintaining the viability of the All Volunteer Force?

Secretary **Lehman**. Maintaining comparable pay (base pay plus allowances and bonuses) within a competitive compensation package is an essential element in maintaining required retention levels. If comparable pay is not maintained, then other elements of the total compensation package become much more important. I urge your support in fully funding all bonus and special and incentive pays and authorizing our FY-86 initiatives to enhance the effectiveness of Nuclear Officer Pays, Aviation Officer Continuation Pay, and to fully reimburse our people for all necessary expenses they incur during government-directed travel.

Senator **Levin**. Would you agree that the original Gates Commission which recommended the All Volunteer Force cautioned that pay comparability was necessary to make the AVF a success?

Secretary **Lehman**. In the All Volunteer Force environment, it is essential that we provide a competitive total compensation package, which includes comparable pay as one of its most important elements, to maintain required retention levels.

Senator **Levin**. Do you agree with the following conclusions (not direct quotes): The recruitment task will be difficult in the next few years because the comparability of pay is once again declining, along with civilian unemployment rates, creating a less favorable atmosphere for recruitment. . . . Pay comparability is vital to the retention of experienced non-commissioned officers, who now can find better pay for their skills as civilians. By (Army/Vice Chief of Staff, Gen. Maxwell Thurman, the former top Army recruiter, reported on Jan 4 1985 of the Colorado Springs Gazette Telegraph.).

Secretary **Lehman**. Yes. If we look back just 10 years, the effects of low pay were reflected in reduced retention, recruiters not achieving goals and declining readiness. As a result of congressional action in fiscal years 1980 and 1981, we were able to turn that situation around. I urge your support in ensuring that we do not return to the readiness posture the military experienced just five years ago due to inadequate pay and recruiter resource support.

Senator **Levin**. Pay comparability today is measured, by law, by comparing military wages with what is known as the Professional, Administrative, Technical and Clerical Index—or PATC ("Patsy").

Under the President's pay proposals in this budget, Admiral Watkins, are you aware that the military pay will be further behind the comparability standard—13.4 percent—than at any time in the last 11 years?

Were you aware that according to a comparison with the Employment Cost Index, which some prefer to the PATC standard, military pay in this budget still will be further behind civilian pay—9.6 percent—than at any time in the last 11 years?

These figures were provided by the Office of the Assistant Secretary of Defense for Manpower, Dr. Larry Korb.

Admiral **Watkins**. I am aware that we are behind in comparability and by the amounts you indicate. Of course that is precisely why our bonus programs are so critical to retain those skills which are most sensitive to civilian competition. I urge your support in approving our bonus funding requests for fiscal year 1986 and authorizing other requested initiatives for Nuclear Officer Incentive Pays and the Aviation Officer Continuation Pay. Currently, moreover, service members disposable income is being degraded by the government forcing service members to absorb nearly 50 percent of the necessary expenses incurred during government directed travel. We must move this year to lift this financial burden from the shoulders of our men and women in uniform.

Senator **Levin**. General Vessey said that: "The men and women in uniform need to know . . . this Nation will provide reasonable pay and compensation for them . . . As we continue into a period of economic recovery and as we face a declining manpower pool, we must guard against the erosion of pay retirement, and other benefits . . . We surely do not want to return the forces to the unstable personnel picture of the mid-1970's."

Do you consider that military wages which are further behind civilian wages that at any time in the past 11 years, including mid-1970s, represent "reasonable pay and compensation" for the sacrifices of our armed forces personnel?

Secretary **Lehman**. In terms of direct pay comparability, our wages lag behind the private sector. But, pay comparability is just one element of the total military compensation package which also includes Special and Incentive Pays, bonuses, and supplemental benefits (retirement being the largest). Each service member has a perception of the competitiveness of his or her total compensation package and will more than likely make retention decisions based on that perception. That is why bonuses play such a critical role in retention. They allow the individual services the latitude necessary to target various skill deficit areas as manning problems occur. The funding levels for our bonus and Special and Incentive Pays, and the legislative initiatives in the FY-86 budget, will enable us to achieve required retention levels. If the total compensation package remains competitive, including the element of comparable pay, then people will opt to remain in the service. If we do not fully reimburse our people for government-directed travel, such as permanent change of station moves, then the total compensation package is reduced by the amount of out-of-pocket expenses and becomes less competitive. This cost of doing business should not be shouldered by our men and women in uniform.

Senator Levin. If not, do you disagree with General Vessey's statement that the budget now before us "provides the right sort of support" for our personnel pay?

Secretary Lehman. The FY-86 budget contains the minimum necessary funding levels for bonuses and special and incentive pays to achieve and maintain required retention levels. As I have repeatedly stated, personnel is our number one priority in the U.S. Navy. It is absolutely necessary that our people receive fair compensation. This includes the support of the special pay and bonus programs such as the critical AOCP program to retain the high quality necessary to operate our modern Navy. Additionally, the budget includes several legislative initiatives to increase reimbursements for government-directed travel. Without full reimbursement for these out-of-pocket expenses, the value of our members' total compensation package is eroded, becoming less competitive.

Senator Levin. Admiral, considering how far behind this budget is re: comparability, and Secretary Lehman's testimony today that the proposed 3 percent pay raise is "woefully inadequate," why did you state today that this budget "supports providing the people needed" by the Navy?

Admiral Watkins. By not achieving comparability in base pay, we must depend on our bonus and special and incentive pays to achieve and maintain our required retention rates. The budget contains funding levels for our bonus programs which are the minimum required. The budget also includes several legislative initiatives which will make the total compensation packages of many of our skill areas more competitive with the private sector. I urge your support for these funding levels and authorizing these legislative initiatives.

Senator Levin. How much more would have to be added to the FY-86 budget request to restore comparability to military pay, measured by the PATC and by the Employment Cost Index?

Admiral Watkins. Not including the 3 percent pay raise included in the FY-1986 budget, raises required to restore comparability would be 16.8 percent based on the Professional, Administrative, Technical and Clerical Index and 12.9 percent based on the Employment Cost Index.

Senator Levin. Admiral Watkins, there was a discussion yesterday as to whether personnel costs should be included in comparisons of NATO and Warsaw Pact defense spending, and whether the fact that we pay our military personnel much more than Warsaw Pact nations pay their military personnel means we somehow are receiving less defense payoffs for our use of more dollars for personnel than they spend, thus allowing them to spend more rubles for equipment, R&D and military construction.

Do you get anything for our larger spending on personnel in terms of increased military capabilities?

Admiral Watkins. I completely disagree with the idea that by paying personnel more than the Warsaw Pact, we are somehow getting less for our defense dollar. People are the key factor in any military equation and are becoming increasingly more so as our equipment becomes more sophisticated. Since we compete with the private sector for our manpower, unlike the Warsaw Pack nations who use conscription, it is not surprising that we would have higher personnel costs. The payoff is in the increased readiness that we get from the well-trained, dedicated and enthusiastic men and women manning our Navy today.

Senator Levin. Does spending enough money for adequate pay and personnel benefits yield us any military benefits?

Admiral Watkins. As I indicated, the benefit is in increased readiness. Readiness levels of our ships and squadrons are directly related to the quantity and quality of their manning. Our experience of the late 70's, when we were not adequately compensating our people, demonstrated clearly that when we cannot man our ships and squadrons to required levels, readiness suffers.

Senator **Levin**. Are we a stronger nation militarily because we spend more on personnel than do the Warsaw Pact nations?

Admiral **Watkins**. I feel we are stronger militarily because of the resources we dedicate to our people. In addition to the quantifiable increases in readiness that stem from manning improvements, there are the factors of initiative, dedication and leadership that our system fosters. Today our sailors are better trained, more highly motivated and better leaders than their Warsaw Pact counterparts. These are qualities that I want on my side.

Senator **Levin**. Are there any real military benefits to our spending more on personnel?

Admiral **Watkins**. By attracting and retaining highly trained and experienced personnel we reap the benefits of lower accident rates and less loss of life. The costs of replacement equipment and personnel would become prohibitive.

MANPOWER COSTS

Senator **Levin**. General Kelley, there was a discussion yesterday as to whether personnel costs should be included in comparisons of NATO and Warsaw Pact defense spending, and whether the fact that we pay our military personnel much more than Warsaw Pact nations pay their military personnel means we somehow are receiving less defense payoffs for our use of more dollars for personnel than they spend, thus allowing them to spend more rubles for equipment, R&D, and military construction. Do we get anything for our larger spending on personnel in terms of increased military capabilities?

General **Kelley**. Yes, sir, we do: increased readiness.

Senator **Levin**. Does spending enough money for adequate pay and personnel benefits yield us any military benefits?

General **Kelley**. The Marine Corps is a high quality, committed, well-trained, combat fighting force. First term attrition is down, disciplinary problems are fewer, and job performance is up. The high caliber of personnel is directly related to the improved compensation provided to our service members.

Senator **Levin**. Are we a stronger nation militarily because we spend more on personnel than do the Warsaw Pact nations?

General **Kelley**. Yes, we are because we have higher quality input that enables us to man our more sophisticated high technology equipment.

Senator **Levin**. Are there any real military benefits to our spending more on personnel?

General **Kelley**. Yes. I hope we learned our lesson in the mid 1970's. Then a series of pay raise caps, pay raise reallocations, and erosions in traditional military benefits resulted in the loss of many experienced middle grade NCO's. Their options outside the military were superior to those they could expect by remaining in the Corps without adequate compensation. It has taken many years of our joint efforts to reestablish our career force. The positive Congressional support which brought about substantial military compensation improvements in the 1980's has helped us realize significant improvements in both quality and quantity of new and career Marines.

PAY AND BENEFITS

Senator **Levin**. Whenever I have asked each of the members of the Joint Chiefs of Staff whether he would trade the overall capabilities and components of its Soviet counterpart, I always am told "No."

One of the major reasons for that appears to be that each service so greatly values the much higher quality of US individual personnel to fight harder, think smarter and accomplish the military mission better—compared with the military skills of Soviet personnel in their counterpart service—that none of the chiefs would trade his service for its Soviet opposite number.

Would you agree this conclusion is accurate?

Navy

Admiral **Watkins**. Your conclusion is very accurate. The quality of our men and women in uniform today is unsurpassed. We must do everything possible to ensure a professional quality career force in the coming decade.

Marine Corps

General **Kelley**. Yes, sir, I do.

Senator **Levin**. If that is the case, then wouldn't you say there is a direct military benefit to our paying higher personnel costs than do our Soviet/Warsaw Pact rivals?

Navy

Admiral **Watkins**. I agree that there is a direct military benefit attributable to our personnel compensation system. Our Navy today illustrates this point well. On a given day roughly one-third of our forces are deployed away from the United States. Those forces must be ready to meet any contingency on a continuum from diplomatic presence to full scale conflict. To do this requires that our forces be manned with adequate numbers of fully trained and dedicated personnel. Our forces are manned this way today and if we continue to provide adequate compensation, I am confident we will maintain these readiness levels in the future.

Marine Corps

General **Kelley**. Yes, I would. We reap benefits in the form of increased quality personnel who stay with us for longer periods of time. This is turn increases our experience level and reduces our training costs.

NAVY DEPOT MAINTENANCE BACKLOG RISES SHARPLY

Senator **Levin**. Admiral Watkins, your statement also discusses readiness improvements due to increased depot maintenance efforts for ships and aircraft. Secretary Lehman, your statement says the fiscal year 1986 budget will show a zero backlog in ship overhauls.

Yet, according to preliminary data from the office of the Secretary of Defense, however, the Navy's depot maintenance backlog solely due to funding shortfalls grew by almost 86 percent from fiscal year 1985 to fiscal year 1986 from—$271 million to $504 million—and that this projected backlog is the highest since 1980, and well above that year's $386 million total.

What accounts for this steep increase in unfunded depot maintenance backlog, and why is the Navy underfunding this account? Is it more in ships or aircraft.

What impacts will this have on readiness?

Secretary **Lehman**. The earlier depot maintenance backlog estimates provided by the office of the Secretary of Defense were preliminary figures. Our budget submission reflects refined estimates of the ship maintenance backlog and the backlogs of other depot maintenance items, including aircraft and weapon systems.

The fiscal year 1986 ships maintenance backlog is $80.5 million. There was no backlog at the end of fiscal year 1985. The shortfall represents a backlog of one submarine which is scheduled to be overhauled in October 1986. This compares with an unfunded backlog of fifteen ships in 1980.

The backlog projected for aircraft and other depot maintenance is $252.3 million and $372.4 million for fiscal year 1985 and fiscal year 1986 respectively. These backlog projections are based on program funding of $1,805.3 million and $1,902.2 million for fiscal year 1985 and fiscal year 1986 respectively. Thus we have increased the fiscal year 1986 budget request for aircraft maintenance and other depot maintenance by $96.9 million. The growth in backlog in fiscal year 1986 is in spite of this additional funding and is primarily due to affordability constraints. Despite this higher backlog, the major readiness indicators, such as mission capable rates for aircraft, are projected to sustain the improvements attained since fiscal year 1981. For example, the mission capable rate was 59 percent in fiscal year 1981, 70 percent in fiscal year 1984, and we project that it will be 72 percent in fiscal year 1986.

BALLISTIC MISSILE SUBMARINE SURVIVABILITY

Senator **Levin**. Secretary Lehman, last year and 2 years ago, you stated that the oceans were becoming more rather than less opaque in terms of Soviet capabilities to threaten our strategic ballistic missile submarines. Is this still the case one year later, and will the invulnerability of this leg of the strategic triad continue through the end of the century as you predicted last year and 2 years ago?

Secretary **Lehman**. As in the past 2 years, we continue to concur with the assessment of the National Intelligence Estimate (NIE). [Deleted.]

The Soviets are working hard in the area of anti-submarine warfare (ASW). We project they will make incremental improvements in acoustic and non-acoustic sensors which could improve their ASW capabilities.

We plan to counter this possible increased effectiveness through modernization and improvements to our existing submarines, and continued deployment of the Trident submarine and Trident missiles. The long range of the Trident I and Trident II missiles will permit operation of our submarines in substantially larger patrol areas compared to Poseidon submarine areas. These larger patrol areas greatly increase the Soviet search areas and ASW forces required to conduct the search. The Trident submarine is significantly more quiet than previous submarines and is capable of increased quiet patrol speeds to reduce detection and complicate search by advanced sensors. The size of the Trident submarine allows the installation of advanced countermeasure equipment as potential threats become identified. Advances incorporated into the Trident weapon system will provide increased flexibility in the range of available patrol depths and speeds. As advanced sensors are deployed, it will become important for our submarines to have the capability to operate at greater depths and higher speeds.

Our SSBN Security Program, with the best scientific support available in the country, is dedicated to keeping our SSBNs survivable by anticipating possible threats and developing appropriate responses. This is a dynamic situation as technology develops and we must continue these vital efforts to remain ahead of the threat. Through the SSBN Security Program and the improvements in survivability we have put into our submarines and weapons systems, we expect to have sufficient and flexible response to future threats which might develop from Soviet research. We project the continued survivability of our SSBN force through the end of the century.

MARITIME STRATEGY

Senator LEVIN. Admiral Watkins, would you agree with the following statements? Why or why not?

"The first maritime battle campaign of World War Three will be in the Norwegian Sea. If the engagement should come soon, "The Soviet surface fleet can't survive. It is not a player in the game."

They are by the former Commander of the U.S. Atlantic Fleet and NATO's Atlantic Fleet Commander, the highly respected Former ADM Harry Train.

Admiral WATKINS. The context of Admiral Train's remarks is not clear. What is clear is that Soviet surface naval forces are going to be tough opponents in a conflict in the Norwegian Sea or any where else we fight. It's indeed possible that the Norwegian Sea could be the scene of early naval engagements. [Deleted.] The Soviet Northern Fleet continues to receive larger and more capable ships and submarines. These forces, with heightened levels of lethality in their weapons systems and greater endurance, are an increasingly significant threat. Soviet Northern Fleet forces today [deleted] pose a formidable threat to our maritime interests.

Senator LEVIN. ADM Watkins, ADM Train also warned those who might have the idea that the United States can "go it along" in Atlantic seapower, "you cannot separate United States maritime strategy from NATO maritime strategy."

Has NATO formally adopted your forward striking naval doctrines as the way it will fight the Atlantic War? Has the Alliance agreed that the best way to protect the sea lanes to NATO is to take our most highly valued naval assets and have them attack the most heavily defended sea and land regions of the Soviet Union?

Admiral WATKINS. NATO strategy recognizes the important contribution that forward naval forces can make in the North Atlantic. [Deleted.] Defense of allied shipping in the Atlantic will be provided through a number of measures [deleted].

The Maritime Strategy was developed from our overall National Military Strategy and the NATO strategy of deterrence, forward defense and rapid unified response to aggression. It is a U.S. Navy document that is fully consistent with the overall strategic concept for defense of the North Atlantic area, and the Major NATO Commanders' concept of Maritime Operations (CONMAROPS). The Maritime Strategy has been briefed to Supreme Allied Commander Atlantic (SACLANT), Supreme Allied Commander Europe (SACEUR) and extensively to our NATO allies. It fully takes into account our allies' assets and capabilities, and supports the objectives of the Major NATO Commanders.

SEVEROMORSK MISSILE STORAGE FACILITY ACCIDENT

Senator LEVIN. Subject to classification limits, can you comment on these reports about the accident which reportedly occurred at the Soviet Northern Fleet base? "a. The Soviet Navy will need at least a year to recover from the massive explosion that destroyed most of the principal ammunition depot for its Northern Fleet last May."

Admiral **Watkins**. The Soviets may well need [deleted] to [deleted] the facility at Severomorsk; however, [deleted] of the blast, [deleted] had begun and [deleted] began arriving. The facility probably never [deleted] and now should be sufficiently [deleted] needs.

Senator **Levin** "b. The explosion was believed to have destroyed up to [deleted] of the Soviet fleet's stockpile of surface-to-air missiles."

Admiral **Watkins**. About [deleted] surface-to-air missiles (SAMs) in the Northern Fleet were destroyed. Additionally, about [deleted] were damaged. The losses probably represent [deleted] of the total Soviet SAM stockpile. In fact, we believe most of the [deleted] and from [deleted].

Senator **Levin** "c. A preliminary study of evidence on the devastating explosion in May at the Soviet Union's ice-free Severomorsk naval base near Murmansk suggests to intelligence analysts that operations of the Northern Fleet will be hampered for some time and that the scale of scheduled fleet exercises may have to be curtailed."

Admiral **Watkins**. The weapons loss at Severomorsk may have caused some [deleted] but Northern Fleet activity since [deleted].

Senator **Levin** "d. There is evidence that the accident cost the Northern Fleet, the strongest of the four fleets in the Soviet Navy, a substantial portion of its stockpiles of surface-to-air missiles and antiship missiles."

Admiral **Watkins**. The accident caused the loss of about [deleted] SAMS in the Northern Fleet. Antiship cruise missile (ASCM) losses were also [deleted] with [deleted] as well as [deleted] ASCMs destroyed.

Senator **Levin** "e. The Northern Fleet is regarded by intelligence analysts of the United States and other NATO navies as the most serious potential wartime danger to allied merchant and naval shipping in the North Atlantic."

Admiral **Watkins**. In terms of the threat to allied maritime interests in the North Atlantic, that is certainly true. The Soviet Northern Fleet, consisting of over 600 ships and submarines and some 425 aircraft, is the most modern of the Soviet fleets and has among its missions the destruction of hostile naval and merchant ships.

DC-9 AIRCRAFT

Senator **Levin**. Is the Navy still committed to completing the transition of all the squadrons to newer DC-9 type aircraft before the end of FY 85? If not, why are you contradicting the direct will of Congress?

Admiral **Watkins**. The Navy remains committed to transitioning all Naval Reserve Air Logistic squadrons to DC-9 aircraft during FY 85. The remaining squadrons will commence transition as soon as aircraft can be made available during FY 85. The volatile nature of the used transport market continues to dictate an unpredictable aircraft acquisition schedule. One used DC-9 aircraft has already been acquired in FY 85. This aircraft is undergoing a depot level inspection and is expected to be available to a transitioning squadron during fiscal year 85. We are continuing to actively pursue acquisition of the remaining three used transports to complete transition of all Reserve Logistic Squadrons.

SHIP DELIVERIES

Senator **Levin**. Secretary Lehman, last year you claimed credit for this administration for the increase in the number of Navy ships which occurred between February 5, 1981 and February 8, 1984. The list you provided showed that, of those 72 ships, only four were Reagan adminstration—three auxiliary ships and the Battleship *New Jersey*, whose reactivation I supported. The rest were Nixon, Ford and Carter ships.

Of all the ships delivered to the Navy since then, how many were requested by the Reagan administration as opposed to other administrations or added by Congress?

Secretary **Lehman**. Twenty-five ships were delivered to the Navy this past year. Of these, five were requested and appropriated during the Reagan administration. Thanks largely to the larger budgets of the last four years, President Reagan was able to cancel the Carter administration plans for early retirement of destroyers, cruisers, and two carriers, enabling these new deliveries to expand the size of the fleet substantially.

Senator **Levin**. For the record, please provide a list and identify under which Congress and Presidential administration they were authorized and funded.

Secretary **Lehman**. The following ships have been delivered to the Navy during the period February 8, 1984, through February 5, 1985.

AUTHORIZED AND FUNDED

Ship	Date delivered	Fiscal year	Congress	President
SSN-708	17 Feb 1984	1974	93rd	Nixon.
FFG-43	24 Feb 1984	1979	95th	Carter.
FFG-47	24 Feb 1984	1980	96th	Carter.
TARC-7	19 Mar 1984	1979	95th	Carter.
TAGOS-1	9 Apr 1984	1979	95th	Carter.
BB-61	16 Apr 1984	1983	98th	Reagan.
SSN-716	30 Apr 1984	1978	95th	Carter.
CG-48	7 May 1984	1980	96th	Carter.
TAGOS-2	6 Jun 1984	1979	95th	Carter.
FFG-46	8 Jun 1984	1980	96th	Carter.
FFG-49	22 Jun 1984	1980	96th	Carter.
TAKR-287	22 Jun 1984	1982	97th	Reagan.
TAKR-293	30 Jun 1984	1982	97th	Reagan.
TAKR-294	12 Jul 1984	1982	97th	Reagan.
SSN-709	16 Jul 1984	1974	93rd	Nixon.
TAKR-288	10 Sep 1984	1982	97th	Reagan.
SSBN-730	11 Sep 1984	1977	94th	Ford.
FFG-51	2 Nov 1984	1981	96th	Carter.
SSN-717	14 Nov 1984	1977	94th	Ford.
FFG-48	15 Nov 1984	1980	96th	Carter.
FFG-50	16 Nov 1984	1981	96th	Carter.
TAGOS-3	21 Nov 1984	1980	96th	Carter.
SSN-710	5 Dec 1984	1974	93rd	Nixon.
LSD-41	8 Jan 1985	1981	96th	Carter.
FFG-53	1 Feb 1985	1981	96th	Carter.

It should be noted that a total of 90 ships were appropriated by Congress from fiscal year 82 through fiscal year 85 during the first Reagan Administration. During the period between fiscal year 78 and fiscal year 81, only 66 ships were funded. In addition, under the build and charter program, four TAKR ships were placed on hire during the same period after completing conversion at three shipyards. In addition, this administration canceled previous plans to decommission the Midway and Coral Sea and twenty DDG-37 class guided missile destroyers.

Senator LEVIN. What is the Navy's requirement for hospital ships, mine countermeasure and minehunter ships and major auxiliary ships—oilers, ammunition/stores/tenders, and so forth?

How many are now in the fleet; how many have been authorized and funded for the future, and when will they be delivered; are sufficient numbers of each included in the Navy's five-year shipbuilding program to meet this requirement and by when will this requirement be met in each class of ships?

Admiral **Watkins**. The information is contained in the following table:

Ship type	Number now in fleet	Authorized and funded	Delivery dates	Number in fiscal year DP fiscal years 1986-90	Requirement will be met by
Mobile logistic station ship (AOE/AOR)	11	0		4	1994
Fleet oilers (AO/TAO)	18	7	9/86, 1/87, 5/87, 9/87, 6/88, 10/88, 2/89	10	1989
Ammunition ships (AE)	13	0		3	1994
Combat stores ships (AFS/TAFS/TAF)	10	0		0	(1)
Destroyer tender (AD/AR)	13	9		1	(1)
Submarine tender (AS)	8	9		0	(1)
Hospital ship (TAH)	0	2	10/86, 7/87	0	1987
Mine countermeasures Ship (MCM)	0	9	2/86, 6/86, 7/86, 8/86, 10/86, 5/87, 6/87, 9/87, 10/87	5	1989
Mine sweeper Hunter (MSH)	0	1	11/87	16	1992

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[1] Achieved

Senator **Levin**. What is the impact on the Navy's combat capabilities now and in the future if sufficient number of platforms needed to meet the requirement are not in the fiscal year 1986–fiscal year 1990 shipbuilding request?

Admiral **Watkins**. Sufficient numbers of support ships to meet our requirements are included in the fiscal year 1986–fiscal year 1990 shipbuilding and conversion request.

ASAT PARITY

Senator **Levin**. Secretary Lehman, you answered Senator Kennedy's statement about whether it would be in the Navy's interests to limit Soviet ASAT capability because the U.S. Navy is so dependent on satellites by answering we needed parity with them in ASATs. Could that parity include both sides agreeing to dismantle their low level ASAT capabilities or agreeing to restrictions on certain high altitude ASAT capabilities—if that could be adequately verified?

Secretary **Lehman**. If we seek parity with the Soviets by both sides agreeing to the dismantlement of their low level ASAT capabilities, the U.S. would face a potentially dangerous situation. Even if we were able to be assured that the Soviets had, in fact, dismantled all of their existing ASAT capability—which is itself highly doubtful—the USSR would still be able to draw upon its considerable ASAT experience to threaten our satellite systems on short notice. If the appropriate technology is applied, all ICBMs have a potential low altitude ASAT capability. Thus a ban on a specific low altitude ASAT systems would not achieve parity.

We are continuing to study various factors related to restrictions on high altitude ASAT systems, but, to date, we have been unable to identify a militarily significant restriction which would be both verifiable and not so all-encompassing as to endanger our other space-related activities.

MARITIME BALANCE

Senator **Levin**. Admiral Watkins, you referred to the statement 4 years ago that your predecessor as Chief of Naval Operations, Admiral Tom Hayward, made that he no longer could say the U.S. had maritime superiority and whether we had this superiority.

You also said you thought that, after the past 4 years, we now were "walking out of that gray area" as whether we had this superiority.

Why are you so vague about whether we have this superiority, when the organization of the JCS, "fiscal year 86 Military Posture Statement" says unequivocally the following: (emphasis added) "U.S. naval capabilities will *continue* to outpace the Soviets. The U.S. Navy will *maintain* its open ocean *superiority* and *continue* to improve its capability to operate in high threat areas while performing missions in support of allies and forces ashore." (p. 56)

As a member of the Joint Chiefs, you are supposed to review this document before its publication. Did you object to this statement which clearly shows the U.S. is out of the "gray area" on this question?

Admiral **Watkins**. No Senator, I did not object to this statement. In fact my staff was furnished—for review and comment—a copy of each draft of the Chairman's Posture Statement prior to its publication.

To elaborate further on your specific question, the CJCS Posture Statement refers to open-ocean superiority in a very narrow context. This reference to open-ocean superiority only appears in the section on regional balance, subsection on maritime balance. The Posture Statement asserts in the subsection: [Deleted.] The statement discusses further the U.S. Navy's advantage in anti-submarine warfare. Thus, within this narrow focus, there is no doubt that the U.S. Navy is superior. That is to say, if the Soviets choose to move out from under the protection of their land-based air support to challenge us in the open-ocean areas, the U.S. Navy has the edge that will allow us to meet and defeat the Soviet threat. However, I hasten to add the CJCS Posture Statement also asserts: "Without carrier cover, however, U.S. ships will be outranged by Soviet surface and air-launched cruise missiles until the full deployment of Harpoon and Tomahawk."

NAVAL RESERVE CONCERNS

Senator **Levin**. Since the Naval Reserve Anti-submarine Warfare Maritime Patrol Aircraft community provides 35 percent of the Navy's wartime capability against the improving Soviet submarine threat and contributes significantly to peacetime operations, what is the Navy plan for P-3C introduction into the Naval Reserve forces?

Shouldn't the Navy make introduction of the P-3C into the Naval Reserve Forces a high priority considering that Defense Secretary Weinberger said last year in his FY 85 Report to Congress that:

"The Reserve squadrons operate our oldest models, the P-3As and early P-3Bs, which have become technically obsolete to the current Soviet submarine threat."

Admiral **Watkins**. Introduction of the P-3C into the Naval Reserve Force is a high priority consideration and the Navy plans to have a P-3C squadron in the Naval Reserve by FY 88. Five of the squadron's nine P-3Cs will be reassigned active assets and the other four will be fiscal year 86 production aircraft that are currently in the budget request. In addition, Master Augment Unit (MAU) Brunswick will continue to train augment unit crews in the P-3C Update II aircraft assigned.

The P-3As and early P-3Bs assigned to the Naval Reserve are undergoing Tactical Navigation Modification (TACNAVMOD) to improve navigation accuracy and the tactical display. This mod, along with improved acoustic and non-acoustic modifications are being incorporated which will make the aircraft capable of meeting the threat through the 1980's and into the early 1990s. TACNAVMOD will be complete in FY 86 and the additional improvements will be complete in FY 89.

Senator **Levin**. Are there any plans to implement the "horizontal integration" policy of the Secretary of the Navy by introducing new production P-3Cs into the reserve squadrons?

Admiral **Watkins**. Introduction of the P-3C production aircraft for the Naval Reserve will start in FY 88 using four of the nine aircraft requested in fiscal year 86. Five additional active assets will be modified to production aircraft capability in FY 87 and fiscal year 88 giving the Naval Reserve its first P-3C squadron in FY 88. Follow on transitions for production aircraft will continue for the Naval Reserve at a rate of four aircraft per year, or one squadron every two years through 1993 when the active forces complete P-3C transition. After 1993, the Naval Reserve will transition one squadron (nine aircraft) per year.

Senator **Levin**. Since proposed production levels of nine P-3C per year preclude attaining an all P-3C active and reserve force until well beyond the year 2000, what is the service life extension program (SLEP) and avionics modernization plan for the P-3A, P-3B lightweight and P-3B heavyweight aircraft in the reserve inventory in the 1990s? What is the estimated cost of both SLEP and avionics modernization plan for each aircraft type?

Admiral **Watkins**. SLEP and avionics modernization of the P-3B heavyweight aircraft beginning in 1989 and continuing through 1991 will cost an estimated $16–18 million per aircraft (FY 85 dollars). These aircraft will be assigned to the Naval Reserve and will continue in the inventory until 2001. The avionics modernization will be P-3C Update IV equivalent.

Currently, there are no plans to extend the service life of P-3B lightweight and P-3A aircraft. Although modifications to these aircraft are technically possible, recent Navy studies have shown that the cost to upgrade these older, lightweight aircraft to an Update III configuration would cost about 80 percent the cost of a new aircraft with limited service life remaining even with SLEP. Modifications to these aircraft are planned to give them a baseline capability against Soviet first-generation targets. Increased inspections will be conducted to ensure that the necessary confidence in structural integrity exists. No attempt will be made to increase their gross take-off weight to be equal to the P-3C. Avionics modernization will be restricted to the TACNAVMOD, although the feasibility of installing the UYS-1 Advanced Signal Processor is presently being investigated. These P-3B lightweight and P-3A aircraft will be modified as necessary to provide a stop-gap until the Reserves receive P-3C aircraft.

Senator **Levin**. What is the modernization plan for P-3 (Non-Update version) coming to the reserves and what is the cost of that plan?

Admiral **Watkins**. P-3C Non-updates (NUDS) will be updated to the P-3C Update III prior to being transferred to the Naval Reserve beginning in 1988. The cost of that update is $6.2 million per aircraft (fiscal year 86 dollars) and the Naval Reserve will receive P-3C Update III aircraft through 1994. After 1994, the active and reserve P-3C aircraft will begin Update IV at a rate of 40 aircraft per year.

Senator **Levin**. Has the Navy investigated multi-year procurement at enhanced levels (12-15 P-3Cs per year) to meet reserve force requirements? What were the cost savings associated with this program compared with the cost of procuring nine aircraft yearly under the current program?

Admiral **Watkins**. The Navy has not investigated multi-year procurement at enhanced levels of 12-15 P-3C aircraft a year although Lockheed has provided some data in the past for such a procurement. Lockheed proposals indicate a savings of about 12-13 percent for 12-15 aircraft per year as opposed to 8.7 percent for nine aircraft per year.

Senator **Levin**. The fiscal year 85 Appropriations Act provided $7.5 million for the fabrication of a Display Update for the AQA-7(V-10-12) ASW Acoustic Processor. What is the status of this program, and what is your evaluation of this proposal? When will fabrication and testing be completed?

Admiral **Watkins**. The Navy has completed definition of the modification program required to demonstrate the system. This definition will be followed by preparation of a detailed Statement of Work, Sole-Source Justification, and data requirements, leading to a contract in December 1985. The vendor's schedule shows a development schedule of 30 months and subsequent Navy testing (TECH/OPEVAL) is anticipated to last six months. A decision for full production (Milestone III) is therefore expected in April 1989. Assuming a production contract in June 1989, the first P-3B is expected to receive installation of the new display in December 1990.

Navy evaluation of this proposal is not possible at this time because test systems are not available. If, however, the system meets program definition, incorporation of the enhancement in Naval Reserve aircraft that are not P-3C Update III equipped or equivalent, will be requested.

MODERNIZING AND IMPROVING THE NAVAL RESERVE

Senator **Levin**. Last year, the Navy submitted a Naval Reserve Master Plan for modernizing and improving the Naval Reserve. Since then, what progress has been made to implement this plan--by program; is the plan on schedule as projected last year of have there been changes to it since then; if there are changes, please justify those by program?

Admiral **Watkins**. Last year's "Report to the Congress on the Navy's Total Force" was the first in a series which will be submitted to congress each year. This year's report is in the final stages of preparation. It will answer your specific questions by providing the status of the initiatives discussed last year and will up-date our plan for modernizing the Naval Reserve.

Chairman **Goldwater**. I want to thank each of you. I think this has been a very, very productive hearing, and I just want you to keep on doing what you have been doing.

The meeting is now adjourned.

[Whereupon, at 11:55 a.m., the committee adjourned subject to the call of the Chair.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1986

THURSDAY, FEBRUARY 7, 1985

U.S. SENATE,
ARMED SERVICES COMMITTEE,
Washington, DC.

AIR FORCE PROGRAMS

The committee met in open session, pursuant to notice, at 9 a.m., in room SR-253, Russell Senate Office Building, Senator Barry Goldwater (chairman) presiding.

Present: Senators Goldwater, Thurmond, Warner, Humphrey, Quayle, Wilson, Gramm, Denton, Nunn, Exon, Levin, Bingaman, and Dixon.

Staff present: James F. McGovern, staff director and chief counsel; Arnold L. Punaro, staff director for the minority; Christine C. Dauth, chief clerk; Patrick A. Tucker, counsel; Robert F. Bott, William E. Hoehn, Jr., George K. Johnson, Jr., Douglas R. Graham, Ronald P. Kelly, David S. Lyles, José E. Martinez, Carl M. Smith, John J. Hamre, Alan Chvotkin, and Robert Bell, professional staff members; Patricia L. Watson and Russell C. Miller, research assistants and Karen A. Love, staff assistant.

Also present: Gerald J. Smith, assistant to Senator Goldwater; Les Brownlee, assistant to Senator Warner; Robert Savitt and James Bodner, assistants to Senator Cohen; Bernard R. Toon and Henry Sokolski, assistants to Senator Quayle; John Roddy, assistant to Senator East; Mark J. Albrecht, assistant to Senator Wilson; Francis J. Sullivan and Mary A. Shields, assistants to Senator Stennis; Jeffrey B. Subko, assistant to Senator Exon; Peter D. Lennon, assistant to Senator Levin; James Steinberg, assistant to Senator Kennedy; Charles C. Smith, assistant to Senator Dixon; and Alan Cameron, assistant to Senator Denton.

OPENING STATEMENT BY SENATOR BARRY GOLDWATER, CHAIRMAN

Chairman GOLDWATER. The meeting will come to order.

This morning we are convened to receive testimony on the overall posture of the Department of the Air Force. I want to welcome the Secretary of the Air Force, Hon. Verne Orr, and the Chief of Staff of the Air Force, Gen. Charles Gabriel.

Gentlemen, we are privileged to have you here with us this morning.

The Air Force budget before us is the largest of the three services. It represents some 35 percent of the total budget authority for the Department of Defense and represents a potential area for budget reduction.

The Air Force share of the total research and development budget is about 40 percent, and the share of the total procurement budget is 54 percent. Clearly the programs that represent this relatively large share of the total Defense Department acquisition effort will be scrutinized carefully this year, both for their implications for the current year, and for their out year affordability.

At the same time we cannot lose sight of the tremendous significance of Air Force programs to the deterrence of war, both nuclear and conventional, and to our prospects of achieving meaningful arms control agreements.

Much of the President's Strategic Modernization Program has been the responsibility of the Air Force, and I might add that the most visible elements of that program, the MX and the B-1 bomber have been managed exceptionally well, and are on schedule and within cost.

Through the leadership of you gentlemen before us today, the Air Force has made measurable progress in modernizing our theater forces, increasing our force projection capabilities, improving the readiness and sustainability of our forces, and ensuring that the Nation is well served by our space-based assets.

Much has been accomplished in each of these areas over the past 4 years, and I hope these accomplishments will become a matter of record as we consider the fiscal year 1986 request.

The Defense Department has been much maligned for its stewardship of Defense resources. What is apparently less newsworthy is the progress you are making, Mr. Secretary, to bring deficiencies to light and to correct them.

I believe you have a good story to tell about the progress you are making in the management area, including pricing, spare parts procurement, and competition. Again, I encourage you to make this a matter of record in the course of our hearings.

Finally, Mr. Secretary, I share the view expressed in the summary statement that has been provided to the Members, that our overall commitment must always be to our people. I will repeat for your benefit, and for the benefit of those fine men and women who proudly wear the Air Force blue, as you have probably heard, that I take strong exception with the remarks of Mr. Stockman regarding the military retirement system.

The Air Force has never been better from a people perspective. I see it when I visit your bases and talk to the young officers and airmen. I see it in their enthusiasm for their jobs and for the modern equipment that permits them to do their jobs better. And I see it in the refreshing sense of patriotism and pride in their profession.

I understand that the witnesses do have a prepared statement, but desire to summarize significant points before we begin questions.

Senator Nunn is unavoidably detained this morning. He will be here later. At that time he will make an opening statement.

Mr. Secretary, the stage is yours.

STATEMENT OF HON. VERNE ORR, SECRETARY OF THE AIR FORCE

Secretary **Orr**. Thank you, Mr. Chairman.

Mr. Chairman, may I express our appreciation for the generous remarks about the men and women in the Air Force.

I would like to make four points. One has to do with our people. We think, as you have indicated, it is the greatest group of young people ever gathered in the Air Force. They are all volunteers, as you know. Their morale is tremendously high. Ninety-nine percent of our new recruits today are high school graduates. Forty-three percent of the officers have degrees above a bachelors.

PERSONNEL

I try to visit a base on the average of once a week. On each base I talk to 50 to 100 enlisted persons for 5 or 10 minutes. Then I take their questions. The No. 1 question I get today is regarding retirement. It has them extremely nervous.

Of course, remarks such as those the day before yesterday are not very helpful.

We had a hearing yesterday, and the ranking minority member of the House Committee stated that in his estimation he had not talked to any legislator who was thinking of changing the retirement system for those now in service. That is very helpful.

If that is indeed the sense of the committees and of the Congress, the more we can get that out to our troops, the better. Interestingly enough, I have talked to master sergeants who are even thinking of leaving because they are afraid that their retirement will be affected.

I try to tell them I don't think that is the intent of Congress; that I think it is prospective for people coming in after 1987 or 1988. Nevertheless, that great fear does exist in their minds and it is upsetting.

Our retention is good. It has slipped just a little in the last year. It was up to 66 percent of those eligible. It is now down to 62 percent.

We see a trend in pilots that bothers us a little bit. We got more notices of intentions to leave the Air Force from Military Airlift Command pilots in the first quarter of fiscal year 1985 than we received all the preceding year.

Chairman **Goldwater**. May I interrupt?

Secretary **Orr**. Yes, certainly.

Chairman **Goldwater**. Has that changed a little bit now?

Secretary **Orr**. Yes, the first quarter apparently was a bit of an aberration.

The second quarter is not continuing as bad a trend. It looks as though it may level off.

Chairman **Goldwater**. You know there have been a lot of small airlines starting up. They are always looking for pilots. I don't think that is going to continue.

Secretary **Orr**. We understand that the total airline hiring will be maybe only 200 or 300 more than it was the year before. I believe the figures are in the neighborhood of 5,000 pilots that the airlines plan to hire. We were disturbed, particularly in the first quarter.

RELIABILITY AND MAINTAINABILITY

The second thing I would like to mention is the work we are doing on reliability and maintainability. The Chairman may know of it.

The F-4 fighter has a high frequency radio under the rear seat, a very excellent place to put it. When the plane was designed, the radio had good reliability. Unfortunately, it now lasts only one or two sorties. It is an explosive seat, so we have to get the experts out to dearm the seat and put in a new radio.

We need to do one of two things. We need to improve reliability or we need to improve maintainability. If that was the best reliability we could get at the time the plane was built 20 years or more ago, and it probably was, then we should have put it where it was more easily maintainable.

We are working on both ends of the spectrum. To do so, we are bringing in some of the great young people the chairman spoke about, who get scrapped knuckles and grease under their fingernails trying to repair the plane and help you with the maintainability, so that when it is redesigned their voices will be heard. We are attacking both problems at the same time.

SPARE PARTS

The third thing I mentioned is our continuing work on spare parts. We think we were among the first to work on it. We had competition advocates starting 3 years ago in January. We have gone out to every base to give awards to people who have come in with ideas and we have done that in full auditoriums so that lots of people could see that we are rewarding those who bring in ideas to help us.

We have just given out the 100th award to people who have come up with money-saving ideas.

OVERSPECIFICATION

The last thing I will touch on is the question of overspecification or "overspecing" as it is sometimes called, the tendency to put into a product more than may be necessary.

When we analyzed the $7,000 coffee pot, it appeared it was not so much overpriced, but that we had asked for too much, maybe things that were not necessary. That coffee pot on a commercial airliner sells for $3,200 and it undoubtedly could have substituted for the one we ordered.

Someone in our office said we have designed a flashlight in one of our planes which will still be usable in a crash after the crew is killed.

We are trying to get into the problem of not overspecifying, but trying to be realistic. When you do that you are attacking human nature because the nature of all of us is to try for the last possible inch.

In air pollution or water pollution, if we can get 90 percent of the pollutants out, we may try for 92 percent, and the last 2 percent conceivably can cost as much as the first 90 percent.

When we buy a stereo we look at equipment that advertises distortion levels that may be well below the human ability to detect. We are paying money for something that is not necessary.

We are still trying to get the message down to all levels. It is a big Air Force. We are trying to get it down to the people who actually design and test products and say let us not design in any more than is absolutely necessary.

I would not want to close without thanking the committee for their great cooperation in the past, for the warmth with which we have been received and for the generosity with which all our programs have been received, even those from time to time that couldn't be passed because of budget stringencies. Thank you very much for the courtesies you have always extended to us.

[The joint opening statement of Secretary Orr and General Gabriel and accompanying document "U.S. Air Force, Fiscal Year 1986, Report to the Congress of the United States of America," follows:]

JOINT PREPARED STATEMENT OF HON. VERNE ORR, SECRETARY OF THE AIR FORCE AND GEN. CHARLES A. GABRIEL, CHIEF OF STAFF, U.S. AIR FORCE

EXECUTIVE SUMMARY

We are making good progress on a well-conceived program to return our defenses to a level of strength sufficient to counter a growing global threat. Congress and the American people have been supportive of Air Force initiatives to rebuild our forces and improve the quality of life of our people to ensure peace through strength.

Since last year's report, the results of our efforts to achieve a balanced deterrent posture have become more apparent. The Soviets have not gained one additional yard of territory. And although they have agreed to resume discussions on armament reductions, the Soviet expansion of power has not ceased, and the massive Soviet military buildup continues. History has repeatedly shown that the only effective counter to such a buildup is through strength. Rebuilding our strength is the only prudent way to deter the Soviets while encouraging meaningful arms reduction negotiations.

Priorities

Our first priority remains to counter the Soviet nuclear force buildup by ensuring that deterrence remains strong. At the same time, we must prepare our conventional forces to meet a global threat. We, therefore, have increased emphasis on fielding weapon systems to respond at all levels of conflict—strategic nuclear, tactical nuclear, conventional warfare, or special operations—to include terrorism (efforts focusing primarily on improving our capability to protect our people and bases and to increase our sensitivity to this threat).

But systems and capabilities alone can't get the job done. The best weapons in the world would be of little value without trained and motivated people to operate and support them. Consequently, our overall commitment must always be to our people.

This year we continue to emphasize the priorities we believe will address the improvements most vital to our combat capability.

- Modernize strategic forces (offensive and defensive)
- Improve readiness and sustainability of general purpose forces
- Increase airlift capability
- Modernize and expand tactical forces.

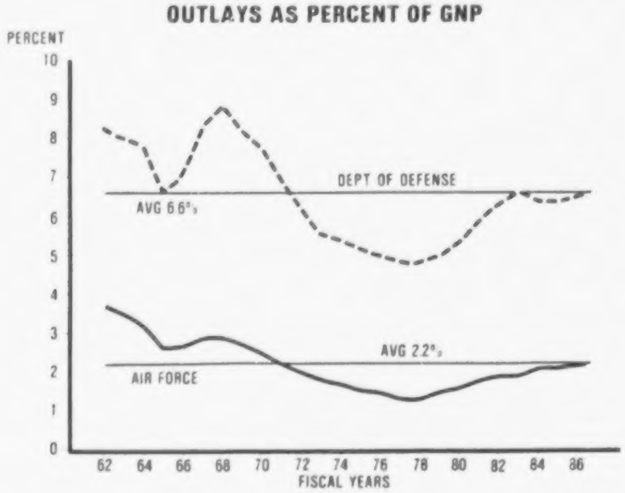
Furthermore, our nation's growing civilian and military reliance on space-based systems, coupled with the Soviet potential to disrupt these systems, requires that we meet the challenges and opportunities space presents.

PART I: AIR FORCE RESOURCES

BUDGET

These priorities guide the Air Force in constructing a balanced program that ensures quality people and quality forces to provide a credible deterrent through increasingly effective strategic, conventional, and special operations forces to meet global commitments. This budget is, in our view, the minimum necessary to counter potential threats to our national security.

Figure 1



OUTLAYS AS PERCENT OF GNP

For Fiscal Year 1986, the Air Force requests $110.3B to provide the required quality people and forces. The size of the Defense Department budget has grown during the last four years but this year still amounts to only 6.6 percent of the gross national product. This portion is significantly below that of the 50s and 60s, a period characterized by clear Western nuclear superiority. Today, the United States faces an adversary committed to developing an unprecedented peacetime military structure—a structure that far exceeds that necessary for defensive purposes.

OUR PEOPLE

FY 84 was another banner recruiting year. Ninety-nine percent of our new recruits had high school diplomas compared to 83 percent in FY 79. Another indication of the quality of our new enlisted people is that on the average they can read at the 11th grade level, compared with a 9th grade national average. Officer recruitment also reflects high quality. And, except for shortages in some medical areas like obstetrics-gynecology, orthopedics, and certain surgical specialties, our recruiting of nurses, doctors, and specialists is strong.

But economic improvements, better private sector employment opportunities, and declining numbers of military-age men and women could quickly change this picture. We must not take our people for granted and allow their pay and benefits to lag behind their private sector counterparts. For example, although first-term reenlistment of eligibles is at 62 percent compared to 36 percent in FY 80, it was 66 percent only a year ago. In the officer corps, this trend is of particular concern in the retention of pilots. For example, in the Military Airlift Command (MAC), the percentage of pilots we expected to stay in through their eleventh year dropped from 79 percent in FY 83 to 66 percent in FY 84. In fact, in the first four months of this year more MAC pilots have indicated their intention to leave than left all last year. Despite the four percent basic pay raise this year, together with several allowance increases, military pay remains 9.6 percent behind comparable private sector pay as measured by the Employment Cost Index (ECI).

We should not attack the retirement system that has long served us well in retaining quality people; we should not attack benefits like commissaries and exchanges that make a difficult life more bearable.

We should not expect military people to absorb inordinate moving expenses out of their own pockets. Our people still have to pay between $1,500 and $3,000 out of their own funds to cover expenses on an average move. Weight allowances are inadequate to compensate Air Force people for moving household goods from station to station, and this budget requests an incremental increase. Recent weight allowance increases for all federal civilian workers leave the military—who move more often—as the only group where this problem has not been addressed.

This year we plan to place more emphasis on these quality of life issues, such as increasing weight allowances, providing junior enlisted members travel entitlements, and providing a temporary lodging expense allowance. The important issues of the potential IRS ruling on homeowners' mortgage interest deductions for income taxes, protecting the value of our retirement system, and providing dependent dental care will also receive increased emphasis.

We program Air Force active military manpower to grow by 9,400 people in FY 86. We need these people to man properly an expanded and modernized force structure—such as the B-1B, tactical force increases, the C-5B, the Ground-Launched Cruise Missile (GLCM), Precision Location Strike System (PLSS), and improvements in medical readiness in Europe. Unfortunately, modernization in Europe is constrained by a congressionally mandated troop strength ceiling that requires the services to withdraw existing force structure, without consideration of the threat, as more modern systems are added. In FY 86 alone, the US Commander in Chief, Europe, will be forced to reduce more than 3,400 military authorizations from the Air Force program in Europe to accommodate this ceiling.

Our Air National Guard, Air Force Reserve, and Air Force civilians are important members of this team. Total Force is much more than a policy; it is a proven path to the most economical and effective way of meeting defense obligations. The Guard and Reserve contribute substantially to our tactical, airlift, and strategic force structure in ways we could not do without. And with the addition of new missions, we will depend on them even more in the coming year. For example, in FY 86 our Air Reserve Forces will grow by 5,740 positions. In the past five years Air Reserve Forces have grown 14 percent, compared to growth in the active force of 5.6 percent.

MANAGING RESOURCES

Over the last two years the Air Force has reevaluated its entire system of pricing and buying spare parts and support equipment. Although some "horror stories" have appeared about overpriced items, almost all were unearthed by the Air Force in its ongoing--and successful—effort to bring these aberrations to light and correct them. We are attacking the issue across the board and correcting problems. We have also received assurances from industry that they are concentrating on correcting instances of overpricing.

Our process of ferreting out possible overpricing has become an integral part of every procurement, and we are encouraging our people to question prices at all levels. Through the Zero Overpricing Program, Air Force people are highlighting suspicious prices and pointing them out to management.

Another way we are trying to get more for each tax dollar is through increased competition. Always a part of the development phase of major systems, we must increase the focus on continuing competition during the full acquisition cycle. For example, we are encouraging "second sourcing" in system production and follow-on contracts. Last year we added a substantial number of people to our Competition Advocate offices to help "break out" items from contracts and to increase competition. We are cutting out the middle man and dealing directly with the vendor. We have set competition goals for each command and they are pursuing plans to increase competition for all acquisition programs.

In FY 84 only 16 percent of our acquisition dollars were awarded noncompetitively, while we awarded 84 percent competitively, either directly or through "follow-on" contracts. Of this, 31 percent was direct competition. The remaining 53 percent was applied to follow-on contracts—contracts that were originally competed, like the F-16. We also have set aside nearly three billion dollars in FY 86-requested funds for items traditionally bought from a single source that we intend to buy from multiple sources (Alternate Fighter Engine (AFE), cruise missile engine, F-16 canopy transparency are examples).

We have also increased our efforts to stress reliable and maintainable systems. By emphasizing reliability and maintainability at the beginning, we are working to save money in the design, production, operation and support, and acceptance stages. More reliable systems like the C-17 promise to reduce life-cycle costs, require fewer spares and less manpower, and result in higher sortie rates. Along with the traditional acquisition criteria—cost, schedule, and performance—we are making supportability (reliability and maintainability) a key factor throughout the research, development, and acquisition cycle.

Another area we are actively improving is our spare parts inventory management. A problem we've encountered is that the GAO in 1977 and OMB in 1978 criticized DoD for holding parts too long in inventory and encouraged more frequent disposal. We are weighing both sides of the disposal question and will ensure that we don't encourage premature disposal of items.

PART II: FORCES, PROGRAMS, AND CAPABILITIES

Working hard to meet the needs of the commanders and to increase our joint warfighting capability, we are expanding joint exercises and inter-service cooperation to produce the most cost-effective forces possible.

Last May the Chiefs of Staff of the Army and Air Force signed a Memorandum of Agreement on Joint Force Development. This agreement identified 31 initiatives that seek to improve inter-service cooperation and provide the most affordable and effective conventional air-land combat capability. We have made real progress in implementing these initiatives. For example, the Air Force has cancelled development of the ground-based electronic warfare system, Comfy Challenge, because the Army is developing a system that can do that job for us. We are also developing the Joint Surveillance and Target Attack Radar System—Joint STARS—one system to support both services' needs. The Army and the Air Force are solidly behind these initiatives.

We are working with the Navy in the areas of combat identification friend or foe and munitions research, development, test, and evaluation. Further, we are exercising more and more with the fleet to enhance the Total Force capability to conduct maritime operations in defense of the sea lanes of communication, through anti-air warfare, anti-submarine warfare, and anti-surface warfare. Over 42 percent of all joint exercises last year involved maritime operations. In the recent Fleetex 85, we flew E-3 AWACS, KC-135s, F-15s, and B-52s, the latter in both mining and anti-ship roles. To further improve joint training opportunities we are coordinating with the Navy on joint operation of training ranges, including the Navy's effort to establish a mobile sea range. The Air Force is committed to increasing interoperability with the Navy and developing joint doctrine which will improve our maritime warfare capabilities.

Air Force programs requested in the President's Budget support joint initiatives with our sister services and the unified and specified commands and provide effective joint warfighting capabilities for the future.

STRATEGIC MODERNIZATION

Last year, we made considerable progress toward redressing the serious strategic nuclear imbalance that resulted from almost two decades of neglect. But the most important element of the President's comprehensive Strategic Modernization Program is now in jeopardy because of the uncertainties created by congressional actions on our planned FY 85 Peacekeeper procurement. The Peacekeeper missile is absolutely essential to the President's program. Peacekeeper will counter the Soviet superiority in prompt countermilitary capability and deter by taking their silo-based weapons out of the virtual sanctuary they presently enjoy. The Soviets recognize this and are going mobile. Consequently, if our national commitment to Peacekeeper is strong, the Soviets may be willing to consider meaningful cuts in these most destabilizing silo systems. In our view, lack of support for Peacekeeper sends the wrong message to both adversaries and friends regarding our commitment to deterrence.

Our other ICBM modernization efforts are proceeding well. The small ICBM program is on solid footing. We are in the research phase of this program and have contractors exploring the concept of placing this missile in a nuclear-hardened mobile launcher and deploying it on federal lands. We are also studying the practicality and costs of putting the small ICBM in hardened silos. Also, through the Minuteman III guidance system upgrade program, we have been able to increase Minuteman III effectiveness.

The B-1B, the cornerstone of our modernized bomber force, rolled out in September 1984, has started its flight testing program, and is ahead of schedule and within budget. We are requesting funds to procure the final 48 aircraft of our 100 B-1B buy. Our research and development on the Advanced Technology Bomber using low observable technologies continues on schedule with the goal of an early 1990s deployment.

We have now equipped five squadrons of B-52s with Air-Launched Cruise Missiles. We are improving our cruise missiles so they can avoid detection and penetrate increasingly sophisticated Soviet strategic defenses. Offensive avionics system modifications have improved B-52 bombing accuracy by 50 percent and defensive avionics modifications have made it more survivable.

Strategic defense is being improved by modernizing our continental air defense forces, and upgrading both our ballistic missile and atmospheric warning systems for better attack warning and attack assessment. We are also developing, in consonance with the President's Strategic Defense Initiative, several technologies that could provide a comprehensive strategic defense by the turn of the century if future administrations decide to proceed with deploying operational systems.

All of our strategic offensive and defensive programs are being linked together by more survivable and enduring command, control, and communications systems. We are improving and hardening Aircraft Alerting Communications, deploying the Navstar Global Positioning System (GPS) and the Ground Wave Emergency Network (GWEN), and aggressively pursuing development of the Milstar satellite system.

The President's Strategic Modernization Program is the key to arms control initiatives that seek to reduce nuclear arms, provide a credible deterrent, and promote a stable and peaceful world. Successful arms reduction depends on our ability to negotiate from a position of strength: a position we can maintain only by modernizing all three legs of the triad. We are pleased that the Soviets have decided to return to the bargaining table. However, they must recognize that the United States will not be lulled into a one-sided moratorium. Negotiating from a position of strength together with ensuring we have the means for essential verification must form the basis of any meaningful arms negotiations.

READINESS AND SUSTAINABILITY

Some isolated reports this past year have suggested the Air Force is less ready and capable than four years ago. Critics of readiness have focused on the unit reporting system, or C-ratings, a Joint Chiefs of Staff tool that offers a snapshot of a unit's capability against current goals. C-ratings, however, are not an accurate measure of capability over time because we intentionally move the goal our forces are measured against by expanding the areas rated and tightening criteria. Also, C-ratings do not reflect dramatic improvements in the effectiveness of modern aircraft and munitions.

To illustrate, four years ago we had about 4,300 fighters in the Total Force—most of them were older F-4s, A-7s, and F-106s. Today we have over 4,600 fighters, most of them modern F-15s, F-16s, and A-10s. Not only have the numbers increased, these new fighters, particularly with improved munitions, are much more effective than those they replaced. Munitions delivery accuracy has increased by 34 percent. In our most recent "shoot out," the winning F-16 set a new competition record, dropping unguided bombs within an average of five feet of the target. Our previous best average was 29 feet.

We have made great progress funding improved munitions. Our air-to-air missile inventory increased four-fold and our preferred air-to-ground munitions—precision guided munitions and cluster bombs—have grown by 15 percent. We are proposing a 47 percent increase in munitions funding in FY 86 to buy Imaging Infrared Mavericks, High Speed Anti-Radiation Missiles, and other new munitions.

Realistic training is a major factor in the readiness equation, and we have increased flying time for our tactical aircrews by 20 percent since 1980. This flying is being done in the most realistic training and exercise environments in the world. Our Red Flag training in Nevada and exercises like Cope Thunder in the Pacific, Crested Cap in Europe, and Checkered Flag deployments add up to the most ready and capable aircrews in the world. This year we are requesting an additional 92,000 hours for the Total Force, a factor of almost three percent, to continue this increased flying hour trend.

Although we are flying more and training more realistically and aggressively with all the attendant risks, our safety record has been superb. In 1982, the Air Force had what we considered a phenomenally low 2.33 accidents per 100,000 hours of flying. That rate was a new record for us. In 1983, we were able to report that this rate was reduced to 1.73—another record. In 1984, we maintained a level very near that record—1.77.

Finally, logistics is the linchpin of a ready and sustainable force. As a direct result of increased funding for spares combined with force structure growth, we can now fly 76 percent more tactical fighter combat sorties than four years ago. In this budget we propose to spend $5B for aircraft spare parts needed for peacetime training and wartime surge. That level of funding provides 100 percent of our FY 86 requirement for both peacetime operating spares, war readiness spares kits, and base level self-sufficiency (WRSK/BLSS) spares, as well as $240M for other war reserve materiel (OWRM) requirements.

We have turned the corner on providing adequate resources for readiness and sustainability and we intend to maintain our momentum. We are confident our forces are much more effective today, and the JCS are actively working to design a measurement system that will better report that capability and effectiveness.

FORCE PROJECTION

To defend American interests worldwide, we must be able to deploy our combat forces rapidly to wherever those interests may be threatened. No matter how good our equipment or how realistic our training, our combat forces have little deterrent or warfighting value if they can't get to where they are needed in time.

Thanks primarily to aircraft modifications and increased stocks of spares during the last four years, our airlift force can now deploy about 28 percent more combat power. With 50 new C-5Bs, a complete buy of 60 KC-10s, and cargo-convertible features on commercial passenger aircraft (Civil Reserve Air Fleet), we will have, by the end of the decade, almost twice the intertheater airlift capability we had in 1980—better, but still significantly less than what we need.

The key to our future force projection capability is the C-17. This aircraft will greatly increase our strategic lift capability and substantially reduce intratheater movement. The C-17 will be able to operate in both inter- and intratheater roles, will augment the C-130s, and will replace the C-141s as they begin to retire in the 1990s. For the first time we will be able to deliver the full range of Army equipment directly to where it's needed—into the many small and austere airfields currently inaccessible to our long-range airlift force. The C-17 will have significantly increased maintainability and survivability, and will require only about one-third of the C-5 maintenance manhours per flying hour. Combined with our other military airlift aircraft and the CRAF, aggressive development of the C-17 will give our combat forces a full range of air mobility options.

We are also increasing our air refueling capability. In recent years, air refueling requirements have risen for both strategic and conventional forces. New CFM56 engines and additional improvements on the KC-135s will increase capability by about half, while a single KC-10 has the equivalent capability of about three of our current KC-135s. In addition, they can carry a substantial amount of cargo.

Another important effort is the joint Army-Air Force initiative to improve Special Operations Forces (SOF). The Air Force will retain the long-range SOF rotary wing mission until a replacement aircraft for the HH-53 is introduced. We are improving our fixed-wing SOF capability by modifying existing HC-130, AC-130, and MC-130E aircraft and by purchasing additional MC-130Hs. We are improving our combat rescue capability by procuring the HH-60A helicopter.

THEATER FORCES

As the Soviets continue to expand and modernize their theater forces, we cannot depend upon our technological advantage to offset entirely their numerical superiority. To meet the growing size and sophistication of this threat we have designed a comprehensive plan to both increase and modernize our theater forces and provide the extended deterrence this nation seeks.

The Tactical Fighter Roadmap addresses force requirements in terms of both quantity and quality. It prescribes a procurement strategy which will increase the current force of 36 tactical fighter wings to 40 wings while sustaining the force at an acceptable age and modernizing or modifying our existing tactical fighters.

Flexibility and capability of our fighters will be increased as we acquire more sophisticated missiles and the Low Altitude Navigation and Targeting Infrared system for Night (LANTIRN). And we are committed to improving our electronic combat, tactical reconnaissance, and command, control, and communications (C^3) systems.

Finally, our Ground-Launched Cruise Missile (GLCM) deployment in Europe is on schedule as a counter to the extensive Soviet SS-20 deployments. GLCM is operational at RAF Greenham Common, United Kingdom, and Comiso, Italy; and will become operational at Florennes, Belgium, in the near future.

SPACE

Space has become essential to successful military operations. The extent to which we develop our capabilities in space depends on how we and the Soviets perceive the advantages and disadvantages of such use. Since the Russians launched Sputnik over 27 years ago, both the United States and the Soviet Union have greatly increased their reliance on space systems for communications, navigation, weather observation, and surveillance. From all indications, that dependence will continue to grow.

For the last quarter-century, the Soviets have focused their space effort on military requirements, capabilities, and systems. The apparent Soviet goal of space superiority and the steps they are taking to achieve it represent a major threat to US and allied security interests.

In light of our growing dependence on space systems, increasing Soviet military space capability, and the need to provide an operational focus for our military space activities, we are developing the necessary programs and organizational structure to ensure that the threat can be countered.

We are emphasizing programs to make our space systems more survivable and to ensure they can operate in hostile environments. We are working hard to complete the Vandenberg AFB, California, West Coast Shuttle Launch Facility where we plan our first launch next January. Also, DoD has approved a Defense Space Launch Strategy that will permit us to acquire an expendable launch vehicle (ELV) complementary to the Space Shuttle. The Shuttle will remain DoD's primary launch vehicle; however, ELVs will provide a prudent hedge against unforeseen Shuttle problems, give us launch-on-demand flexibility, and let us maintain a space launch industrial base.

To manage our operational, on-orbit assets, we formed and activated Air Force Space Command (SPACECMD) in September 1982. SPACECMD has significantly improved our ability to command and control our operational space assets and their associated ground-based support elements. Yet our space systems are still not formally integrated into the unified and specified command structure. To correct this deficiency, the President directed DoD to proceed with establishing the new Unified Space Command. The new command will exercise operational responsibility for US military space systems, plan for wartime use of space assets, and be the focal point for military requirements in space.

INSTALLATIONS

Keeping our bases in top shape is a challenge. Even with our most up-to-date weapon systems, our combat capability suffers if we must maintain them and launch them from outdated bases that need repair. The need for renovation, repairs, and replacement is continual and cannot be deferred. This year, our Military Construction Program amounts to $2.29B, and our Military Family Housing Program comes to $929M.

We need to proceed with constructing adequate support facilities at our GLCM main operating bases in Europe. Without schools, housing, and community support facilities, we must send our people to these assignments on short, unaccompanied tours with high training and working costs and reduced readiness—an expensive alternative to the needed facilities.

SUMMARY

In sum, the Air Force continues to rebuild its strength. The combat readiness of our forces is higher than ever before, providing the necessary underpinning for deterrence. Further, we are making significant progress toward providing the weapon systems needed to maintain deterrence in the future. We remain committed to the President's Strategic Modernization Program, a program that is essential to restoring the strategic nuclear balance. The Peacekeeper missile is a critical element of that carefully designed program and will help ensure effective deterrence and provide the necessary foundation for meaningful arms negotiations and reductions. With congressional approval and support from the American people, we will accomplish our important but unfinished work.

PART I - AIR FORCE RESOURCES

Our primary national security objective is preserving the US as a free nation, at peace, with its fundamental institutions, economy, and values intact. To achieve this objective, sufficient military forces are necessary to prevent coercion and deter attack on the US, our allies, and our friends. Should deterrence fail, however, we must be ready to deny any aggressor his objectives.

Achieving our security objectives requires that we be responsive to the dynamic character of the threat. The most serious threat continues to be the Soviet Union and its relentless military buildup. Working to build a dominant military power, the Soviet Union has outpaced us in sheer numbers of weapon systems, and they are cutting into the quality advantage we enjoyed in the past. Although the Soviet intent is unknown, their willingness to use armed forces to spread influence and expand control poses a strong threat to us and our allies. The continual Soviet military buildup, combined with the deliberately constrained defense spending in the US in the 1970s, created a significant shift in the military force balance favoring the Soviets. With bipartisan support from the American people and Congress over the past four years, we have begun to redress this imbalance. We are making good progress toward returning our defenses to a level of strength sufficient to counter the growing global threat. But our task is not yet complete.

Since the threats to our security are evolving, diverse, and global, we must be able to deter a wide range of aggression—terrorism, small and large scale conventional combat, or nuclear war. To assure an effective and efficient Air Force contribution to our national security, we have assigned priorities to our mission requirements which reflect the improvements necessary to provide a strong, balanced, and credible deterrent force.

Our success depends on getting the most from the resources we have, and our people remain our most critical resource. Without well-trained and highly motivated people, improving our weapon systems is a wasted effort. Support for our people and their quality of life programs remains a central concern.

This year's priorities reflect our commitment to stay the course and to continue addressing improvements most vital to our combat capability. These priorities remain to:

- Modernize strategic forces (offensive and defensive)
- Improve readiness and sustainability of general purpose forces
- Increase airlift capability
- Modernize and expand tactical forces.

We are also improving our ability to operate efficiently and effectively in space. This nation's heavy civilian and military reliance on space-based systems, coupled with the Soviet's potential to disrupt our space systems, requires that we meet the opportunities and challenges space development presents.

AIR FORCE BUDGET

The Air Force FY 86 budget request supports our nation's requirement for a capable aerospace deterrent force. The Air Force contributes heavily to US defense by providing a wide range of forces—from special operations to strategic nuclear—that ensure our nation maintains its deterrent strength.

We operate two-thirds of the strategic nuclear triad—manned bombers and land-based ICBMs. Our airlift resources underwrite the combat capability of the other military services by delivering their forces and support to the combat, or potential combat, theater. The firepower, flexibility, and responsiveness of our tactical combat forces allow the US to prevent a wide range of conflicts by fielding enough combat force to deter a potential adversary from escalating his aggressive ambitions. We lead in developing and operating the space-based systems contributing to virtually every national security operation. This balanced Air Force program ensures that we build and maintain the nuclear and conventional capability to address sucessfully any threat to our security.

After four years of steady effort, we have built a force better prepared to fight than any since the Vietnam War. Today, our combat capability is improved with new, more effective systems, increased sustainability, and improved training. Our FY 86 request continues the process of building the forces needed to deter tomorrow's threat, keeping them ready to fight, and sustaining them should fighting become necessary. Our budget prudently balances expenditures among mission areas, operating and sustaining today's force, and future deterrence investments. We have carefully funded both long-term force modernization and near-term deterrent forces—a suitable operations and investment relationship central to our goal of balanced aerospace deterrence. Ready, sustainable forces could still fail if their equipment faces a larger threat, or a quantitative advantage not offset by quality.

Budget Review

The FY 86 Air Force request of $110.3B represents an increase of $6.6B over the level approved for FY 85, using the Department of Defense inflation factor of 4.2 percent. Real growth over FY 85, after inflation adjustments, is seven percent. Consistent with our priorities, we plan to use the added funds to modernize strategic forces, improve combat readiness and sustainability, increase airlift, and modernize and expand tactical forces.

Figures 2 and 3 illustrate the distribution of the FY 86 budget authority by major appropriation and mission area. Procurement shows a real growth of five percent. We are requesting new procurement for the Advanced Cruise Missile and increased funding for tactical munitions, tactical missiles, and electronic programs such as Over-the-Horizon-Backscatter Radar (OTH-B) and Tactical Air Control System. Aircraft procurement costs have declined, although total numbers of requested aircraft increase. Operations and Maintenance accounts grow by seven percent as we continue balanced growth for readiness programs like more flying hours, training deployments, and readiness exercises. RDT&E grows by 11 percent with increased funds for the F-15E Dual Role Fighter (DRF), the Advanced Tactical Fighter (ATF), the C-17, Joint STARs, and Advanced Strategic Missile Systems. As the President's Strategic

Program progresses, we see a slight decline in the level of funds devoted to the strategic mission area, while tactical missions receive slightly increased funding. Although fund allocation follows our priorities, strategic missions will receive a slightly smaller share of the budget as our B-1B procurement program tapers off and the future systems (Advanced Technology Bomber and small ICBM) remain in the R&D stage.

Figure 2

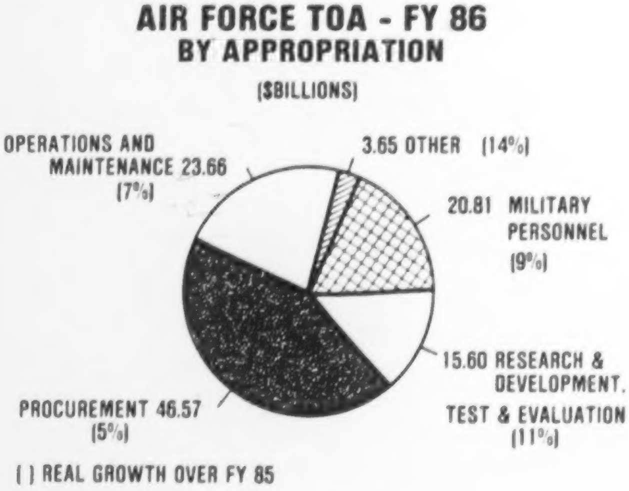
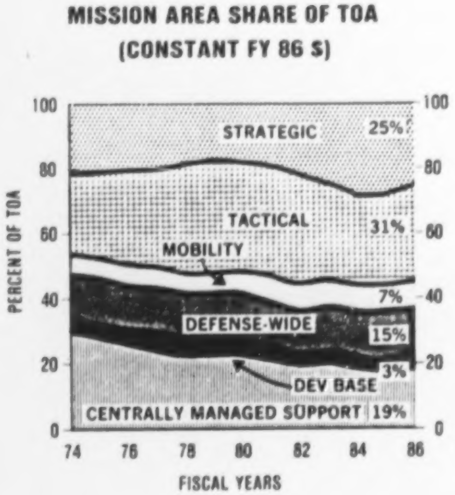


Figure 3



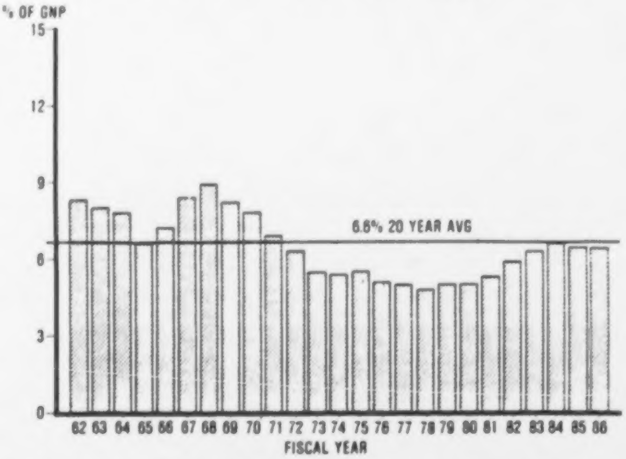
We reach several major milestones in FY 86 as we fully fund our FY 86 requirement for peacetime operating spares (POS), war reserve spares kits (WRSK), and base level self-sufficiency spares (BLSS). After allowing for force modernization, our procurement of 228 tactical fighters will increase the force from 36 to 37 tactical fighter wings—building toward our 40 wing goal. Buying 16 C-5B aircraft increases our outsize airlift capability by 2.7 million ton miles per day (MTM/D). Procurement of the final 48 aircraft of the 100 B-1B program within the established $20.5B cost cap achieves a significant goal of the President's Strategic Modernization Program. These, plus numerous other achievements reflected in this budget request, continue our effort of restoring the strength of our nation's deterrent forces.

Budget Affordability

The level of spending required to support Air Force programs is prudent and affordable. Realizing we cannot reach 100 percent of the requirements, current and projected threats dictate our goal is to acquire maximum combat capability at a reasonable and sustainable cost. We have carefully assigned priorities to our programs and structured and timed them to meet economic and stable production rates. We take our fiscal stewardship responsibility seriously, and we use a large variety of management tools to achieve both savings and a payoff of improved combat forces.

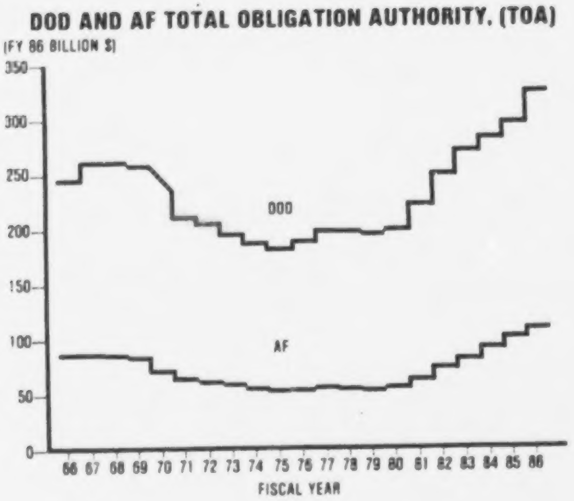
DOD BUDGET AS PERCENT OF GNP

Figure 4



In FY 86, about 6.6 percent of the GNP is dedicated to supporting our defense programs. In the 1950s and 1960s military outlays ranged from 8 to 13 percent of GNP, before dropping to a low of 5 percent in the mid-to-late 1970s. The nation's annual investment in the Air Force has remained fairly stable during the past 20 years. Looking at constant FY 86 dollars, since FY 66, Air Force total obligational authority has held between about $88B in FY 66 and $110B in FY 86 (Figure 5). While today's effort is devoted to countering an unprecedented buildup of military might by the Soviet Union, it remains a fiscally conservative investment.

Figure 5



Even as the affordability of our defense investment is weighed, we must recognize that the purpose of defense spending is to provide national security, not fiscal policy. As the Congressional Budget Office reported:

> The choice of appropriate levels of defense spending essentially is a question of priorities, reflecting assessments of the requirements for national security and evaluations of the importance of alternative uses of resources. This choice should not be influenced unduly by the effects of defense spending on the economy since those effects can, in principle, be offset or achieved by other policies.

Summary

The Air Force continues to regain its strength. The combat readiness of our forces is higher than ever before, thus providing the strength needed for near-term deterrence. Further, we continue to make progress toward providing the weapon systems needed to ensure deterrence remains successful into the future. Our FY 86 budget request supports the balanced aerospace deterrent essential to preserving our national security.

OUR PEOPLE

People are the foundation of our nation's fighting force. Without highly qualified, dedicated men and women even the most sophisticated weaponry would not provide the deterrent force necessary for this nation to remain at peace. The Air Force has successfully recruited and retained top quality people over the last few years. However, retaining our people—particularly our pilots—will become more difficult this year. During the last fiscal year, we experienced a six-percentage-point drop in pilot continuation rates and we expect this moderate decline to continue through FY 85. A similar situation exists within the enlisted force. If this downward trend continues, we will have to recruit and train more and more replacements at ever-increasing costs. Unfortunately, the valuable experience that comes from years on the job is not recoverable at any price; we must regenerate it over time. We must continue to give our people the compensation, benefits, and quality of life they deserve if we expect to retain them.

Another concern this year is the imbalance between mission programs and the number of people needed to support these programs. This end-strength problem is caused by fiscal constraints and congressional limitations in specific areas—a ceiling on the number of military troops in NATO Europe and successive reductions in management headquarters strengths. If we must constrain manpower resources in Europe during FY 86, we must reduce support capabilities and certain programs to allow us to continue modernizing and expanding in new missions such as the Ground-Launched Cruise Missile (GLCM).

The quality of life of our people is also among our highest priorities. We must continually strive to guarantee our people the basics necessary for a decent standard of living. Good quality of life is essential if we expect to attract and retain a quality force. This year, we hope to improve permanent change of station (PCS) reimbursements for our people.

As in past years, the Air Force takes the lead in supporting the Total Force. From 1968 to 1985, Air National Guard and Air Force Reserve manpower increased by 47 percent while the active force decreased by 34 per cent. For FY 86, the Air National Guard and Air Force Reserve continue to grow by 5,740 positions in key wartime required units—a direct result of a coordinated Total Force decision process.

Manpower

Military Manpower Growth. We program our active military manpower to grow by 9,400 people in the FY 86 President's Budget. This growth supports continued emphasis on many of the FY 85 programs—GLCM, F-16, KC-10, TR-1, and E-3A—as well as increasing requirements for force structure modernization and expansion (B-1, C-5B, F-15, F-16, Peacekeeper), combat casualty care, and medical requirements for Air Force operations.

Increased pressure to limit military growth has also resulted in converting significant existing requirements from military to civilian in order to support the force structure. Even with this planned growth, the Air Force will face a continuing shortage in support of key day-to-day operations. The Air Force needs more people to support modernization, expansion, and improved force readiness and sustainability. The requirements for these people are generated by specific programs designed to provide military capability to contend with world crisis situations.

Civilian Manpower Growth. Air Force civilian manpower will grow by 10,300 people in FY 86. This increase is driven by converting non-military-essential positions to civilian, adding new weapon systems, increasing flying hours, and improving how we manage our logistics inventory. Congress has decided that civilian employment will not be managed or constrained by end-strength requirements during FY 85. We are confident this "test" of our ability to manage the civilian workforce without end-strength ceilings will be successful. We will give the results of the test to the Armed Services Committees on March 1, 1985.

Women in the Air Force. The Air Force has a higher percentage of women than any other service, and they will play an even greater role in the future. From 1972 to 1984, women in the Air Force have increased from 16,491 (2.3 percent of total personnel) to 66,569 (11.2 percent). All officer career fields and all but four enlisted specialties (aerial gunner, para-rescue, tactical air command and control, and combat control specialist) are now open to women. However, we exclude women from some specific combat-related positions within otherwise open career fields and specialties. On January 1, 1985, only about six percent of the authorized positions in the Air Force remained closed to women for combat reasons. We have directed a 17 percent accession rate for enlisted women in FY 85 and FY 86. Beyond that, we are also planning to step up the number of women accessed into the Air Force as quickly as we can accommodate them—in compliance with the FY 85 Defense Authorization Act direction to increase women's enlisted accession levels to 19 percent in FY 87 and 22 percent in FY 88.

To improve our methods for recruiting and classifying women, we are evaluating our entire system of accessing, classifying, and employing women in the Air Force. Key to this study is giving women the most career opportunities the law and readiness will permit.

European Troop Strength Ceilings. Since FY 83, Congress has limited the level of US military manpower in Europe because it has perceived European reluctance to fund conventional force capability adequately. The FY 86 ceiling of 326,414 for all services does not exclude manning for GLCM and Pershing II missiles and will be a permanent limit unless the Secretary of Defense certifies that our NATO allies are improving their conventional defense capability. We believe focusing on methods to influence allied contributions clouds the real issue—that our force level growth is tied to countering a growing Soviet and Warsaw Pact conventional capability. This capability includes force expansion, modernization, and improved force projection. We established the size and composition of US forces in Europe to help our allies meet three vital objectives: preserve NATO's political integrity; deter aggression; and militarily defeat any attack on NATO.

We have made trade-offs to maintain mission capability and remain below ceilings. To meet FY 83 ceilings, we undermanned selected units rather than lose some existing theater capability. In doing that, we were less ready. To comply with the FY 84 congressional ceiling, we canceled some programmed growth and returned 1,500 airmen to the CONUS. To complete the GLCM program as well as other Air Force programs that USCINCEUR (the theater commander) has identified as "critical growth," we must sacrifice lower priority theater assets that will decrease available conventional capability. However, if Congress continues to impose constraints on US military manpower levels in Europe, USCINCEUR should continue to determine the mix and level for each service.

Management of General Officer Grades. Congress has steadily reduced the number of flag and general officers since 1968, to the point that we now have the smallest number of flag rank officers since 1952. The most recent reduction, in October 1981, reduced the number from 1,119 to 1,073 for all services. As a result, DoD submitted a Comprehensive Flag and General Officer Management Proposal (DoD 98-62) to Congress in March 1982. To date, Congress has not acted on this legislation. As an interim measure, the Air Force requests general officer strength ceiling be restored to the FY 81 level of 1,119. Without that relief, we must again ask Congress to extend or make permanent the exemption granted in the FY 84 and FY 85 Authorization Bills, allowing us to assign a four-star general as commander of one of our major overseas combatant commands.

Recruiting and Retention

Recruiting. The objective of our recruiting program is to provide enough skilled and motivated people to support Air Force military and civilian manpower requirements and ensure readiness. If our recruiting efforts fail, the progress achieved in the past few years will erode and jeopardize our ability to meet future manpower requirements.

Air Force recruiting efforts have been most successful in recent years. However, we continue to experience shortages, and face competitive challenges for qualified people in such officer career areas as electrical engineering and in the medical areas of obstetrics-gynecology, orthopedics, and other surgical specialties.

As the economy continues to improve, we anticipate increased private sector competition for highly qualified, technically oriented people. We are also concerned about the potential loss of key people involved in such fields as aircraft maintenance, weapons system procurement, computer analysis, engineering, and others spanning all grades.

The Air Force spends less money on recruiting than the other services, yet we consistently recruit high quality people—99 percent of FY 84 enlisted recruits had high school diplomas, and the average college grade point for officers entering the Air Force was 3.0. Our recruiting program is topnotch and we must keep it that way by providing the resources and incentives necessary for continued success.

Retention. After peaking in FY 83, officer continuation and enlisted reenlistment rates have gradually declined and we anticipate that trend to persist through FY 85. Surveys indicate these factors contribute to declining retention:

- A widening pay comparability gap
- High "out-of-pocket" costs of PCS moves
- Threats to the current military retirement system and benefits
- Possible tax deduction loss to military homeowners.

Of special concern is declining pilot retention. High pilot losses jeopardize the experience levels we need to stay mission-ready and substantially increase replacement training costs. Some of our major commands are losing more pilots with the current surge in airline hiring offering an attractive alternative to military aviation. The Air Force cannot financially compete with the airlines; however, we can do our best to solve the problems contributing to declining retention: we can carefully weigh the long-term benefits of keeping our valuable people through comparable and equitable pay, improved PCS reimbursements, and preservation of our current retirement system and the current tax deduction to military homeowners. Failure to do so portends dire consequences for retention. Further, we must maintain Aviation Career Incentive Pay (ACIP), which is long-term career aviation pay and not a short-term bonus.

Total Force

The Air Force, including all active duty, civilian, and reserve components, organizes, trains, and equips as a team. The Air Reserve Forces (ARF) make significant contributions to security and military readiness by providing depth, continuity, and balance to the responsiveness and flexibility of the active force.

A broad-based movement seeks to reduce additional active manpower authorizations by transferring more missions to the ARF, based primarily on the perception that transfers of any mission from the active to the ARF component will always reduce Total Force costs with no loss in overall capability. While few disagree that ARF units usually operate at reduced peacetime activity levels and therefore are less expensive than similar active units, analysts must continue to recognize that the reduced costs are primarily the result of these lower peacetime activity levels. Other factors, such as personnel costs, retirement costs, base operating support costs, and military and civilian grade structure comparisons, must also be addressed when comparing active and ARF units. Readiness indicators show that ARF units meet their required combat capabilities; however, in some mission areas a lower level of training is required, thus performing these missions is cost-effective. While the Air Force is not reluctant to assign appropriate missions to ARF units, both cost-effectiveness and Total Force combat capability considerations must be addressed when contemplating active-to-ARF transfers.

Over the next five years we project the ARF's manpower to increase 13.6 percent while the active force will grow 5.5 percent. The Total Force's 12-year history reflects our commitment to upgrade, modernize, and expand the ARF to meet the growing threat. In recent years the ARF received modern weapon systems such as F-15s, F-16s, and A-10s to upgrade combat capability.

The transfer of strategic airlift aircraft to the ARF began in FY 85 when we formed one C-5 squadron each in the Guard and Reserves. In FY 86, two C-141B squadrons will be formed, one for each of the two ARF components. Remaining transfers of C-5s and C-141s to the ARF will coincide with deliveries of the C-5B and the C-17 and at a rate consistent with cost and force effectiveness. We will transfer 44 C-5 and 16 C-141 aircraft to the Reserve forces in the FY 86-90 Five Year Defense Plan. Additionally, we plan to assign the C-17 to both Guard and Reserve units after initial operational testing in the early 1990s. The ARF role is also expanding in the logistics and combat support areas.

The Air Force continues to lead in implementing the Total Force policy. The ARF is an integral part of our modernization and expansion programs, and we continue to explore new opportunities to expand their role.

US Air Force Training of Latin American Air Forces. Approximately 40 percent of the current air force chiefs of staff in the Caribbean and in Central and South America attended US Air Force undergraduate pilot training (UPT) early in their careers and about 50 percent attended a professional military education (PME) course such as Air War College. Unfortunately, we have not continued training foreign officers at the rate we did in the early 1960s. For a number of years, we considered this training—on the scale we used to do it—too expensive. The Soviet Union, on the other hand, has recently trained several thousand military personnel for Peru. We need to reconsider our foreign military training policies and be realistic about the long-term cost of such training and its real value to us—establishing lasting relationships with those who will be the future leaders in Latin America.

Various political and military factors contributed to the decline in the number of Latin American students trained since the 1960s, but the key problem has been the increasing inability of Latin American air forces to pay for training. The average number of UPT students trained in the 1960s was about 19 per year; only five per year were being trained in the early 1980s. Similar trends exist for PME and other flying and technical training.

However, since FY 81, this downward trend has reversed. In FY 84, over 35 Latin Americans received US Air Force flying training, of which 18 were UPT students. Grant aid for training Latin American militaries was increased about $13M in FY 84, and we are continuing our work to reduce course costs and provide special training. A study is under way on providing military scholarships to Latin American officers and increasing pilot training through grant aid. We must make the effort now, because today's young officers and enlisted people will be the senior leadership the United States must work with tomorrow.

Military Personnel Initiatives and Issues

Pay comparability and the military retirement system are two areas that deserve attention and support. We plan to support this year's Presidential pay raise initiative and to preserve the value of the military retirement system. Another important personnel issue is the proposed IRS ruling regarding the tax exempt status of military allowances. Loss of this exemption would deal a cruel financial blow to our people.

Pay Comparability. Military pay must be comparable to pay available in the private sector for the Air Force to compete successfully for quality volunteers and keep an experienced military force. With a Fiscal Year 1986 pay raise of three percent (effective 1 July 85), military pay levels will lag private sector wage growth by 9.6 percent. However, in view of the budget deficit, we consider the Secretary of Defense's recommendation to be fiscally responsible. The three percent pay raise and improved PCS reimbursements in the budget should preserve the current purchasing power of military pay.

Military Retirement. Several Presidential commissions have reviewed the military retirement system. Most recently, the Fifth Quadrennial Review of Military Compensation (QRMC) provided alternative structural changes to the retirement system. Two task forces from the President's Private Sector Survey on Cost Control (PPSSCC) recommended the military retirement system be changed to make it more similar to private sector plans. These recommendations would dismantle the current retirement system and reduce lifetime retired pay by between 80 and 85 percent for typical retirees. Over the past several years, a number of "piecemeal" changes to the retirement system have already reduced the value of retired pay to future retirees by 15-20 percent.

Opponents of the military retirement program often try to make "comparisons" between the military retirement program and private sector retirement plans. But, these comparisons are not appropriate because the purposes of the two systems differ widely. Private sector plans are primarily old age pension systems—designed to provide old age assistance. The purpose of the military retirement program is to provide ready forces to defend national objectives. It is a force management tool we use to preserve a vigorous, combat-ready military. The system also ensures a mobilization base of retirees and provides a degree of financial security to members who typically must start a second career in their 40s.

The Air Force adamantly opposes any changes to the military retirement system that would adversely affect force readiness. The PPSSCC proposals, for example, drastically reduce retired lifetime earnings so that the retirement system would no longer fulfill that primary purpose. Further, these proposals would remove the value of the military retirement system as the services' number one career incentive. The resultant increases in special and incentive pays we would need to retain the experienced and skilled people necessary to perform the military mission would offset the projected savings during the first several years.

Tax Status of Certain Housing Expenses. In issuing IRS Ruling 83-3, the Internal Revenue Service has proposed reducing a military homeowner's housing deductions (real estate tax, mortgage interest, etc.) by an amount equal to nontaxable housing allowances received (BAQ, BAS, VHA, Rent Plus). Court ruling and congressional intent have long been the legal basis for granting tax-exempt status of military housing allowances. Congress has also defined this tax advantage as an integral portion of Regular Military Compensation (RMC), generally regarded as the military equivalent of private sector salary.

The Air Force strongly opposes IRS Ruling 83-3 because it will impose a severe financial burden on some 290,000 military homeowners—a financial burden equating to a three to five percent pay cut.

Permanent Change of Station (PCS) Reimbursement. A recent Air Force survey revealed that, exclusive of homeownership costs, for every $4 our people spend on a PCS move, the government reimburses only $1. For a staff sergeant, median out-of-pocket moving costs were over $1,500; for a captain, the unreimbursed costs were nearly $2,000. This situation is all the more alarming because over half of our members have to borrow money or withdraw savings to meet PCS expenses—expenses resulting from government-directed moves. Surveys show that PCS costs are a major career detractor for many people.

Of all the services, the Air Force has been the most successful in encouraging tour length extensions, which in turn reduce PCS costs. The average time between Air Force PCS moves is about four years, the longest of any service. Our people are working hard to help us reduce PCS costs; we should at least provide adequate PCS reimbursements for them. To this end, we want to stress four important PCS reimbursement items for FY 86.

Some of the highest expenses our members incur during a move result from inadequate household goods (HHG) weight allowances and from temporary lodging and food costs at old and new duty locations because of delays in departing or in obtaining permanent housing at the new duty station. Unlike federal civilians, who may ship up to 18,000 pounds of HHG and are authorized up to 60 days of temporary lodging and meal reimbursement, military members may ship between 225 to 13,500 pounds of HHG and receive no reimbursement within the CONUS for temporary lodging and subsistence—even though the entitlement was authorized. As an initial step toward helping our people with unreimbursed PCS costs, for FY 86 the Air Force requests incrementally increasing members' household goods weight allowances from the current 225 pounds to 5,000 pounds for E-4 and below with less than 2 years' service and graduated increases up to 18,000 pounds; providing dependent travel entitlements for junior enlisted members (E-1 thru E-4 under two years' service) performing PCS travel within the CONUS; and funding for temporary lodging expense (TLE) for up to four days not to exceed $110 per day.

Dependent Dental Care. The Air Force has long supported a voluntary dependent dental care program. The FY 85 DoD Authorization Act allows dependents space-available use of dental facilities effective July 1, 1985. This authorization is a first step toward a comprehensive dental plan for military families. To this end, the Air Force fully supports the Deputy Secretary of Defense-approved FY 86 initiative that provides diagnostic, preventive, emergency, and basic restorative dental services. Member cost would be a maximum of $10 a month per family with the Air Force funding the remaining 60 percent of the cost. We recommend it begin midway through FY 86 to reduce first-year costs.

Civilian Personnel

Civilian employees compose a large and important segment of the Total Force. Their contributions improve readiness and mission accomplishment on a daily basis. While the Air Force supports the Administration's position on civilian pay and benefits, we are committed to keeping our civilian members full partners in the Total Force.

Civilian personnel management faces many of the same challenges as the military. In particular, the need to attract and retain high quality people is both a necessity and an area of concern. The Air Force will be competing in a very difficult market as we continue to convert military positions to civilian and hire more civilians to monitor our spares acquisition process. Further, once we attract these technically oriented employees, we must ensure our personnel system responds to their needs for recognition, advancement, and security.

Quality of Life Improvements

Funded Dependent Student Travel. In 1983, Congress authorized the funded dependent student travel program to assist those Uniformed Service members who serve overseas and endure the additional financial burden of transporting their dependent children to and from schools in the United States. However, this statute as enacted excludes members stationed in Alaska and Hawaii from the funded program. Consequently, student dependents of members assigned to these two overseas locations must either continue to rely on space-available travel, which is severely limited during holidays and summer months, or pay out of pocket all costs of student travel by commercial air. We are requesting again this year that members stationed in Alaska and Hawaii be included in this program.

The Air Force also requests that Congress restore the funding for the CONUS portion of travel for student dependents of military members stationed overseas. The FY 84 DoD Supplemental Appropriations Act and the FY 85 DoD Appropriations Act eliminated funding for the CONUS portion of travel for student dependents of military members. This action created a severe disparity in the funding of dependent student travel for military and federal civilian members since now civilian dependent travel is funded and military dependent travel is not.

Use of Commercial Credit Cards in Army-Air Force Exchanges. Recognizing the positive impact on readiness, we must increase our commitment to improving the quality of life for all our people by providing excellent facilities in which to work, live, and raise a family. Additionally, we must strive to align service life with that of our civilian counterparts in terms of ability to enjoy the total benefits of this great nation. In this regard, we feel the most important non-budgetary item for consideration this year is the authority to use commercial credit cards in our exchange system.

MANAGING RESOURCES

We must have a combat capability that can match the diverse and sophisticated threats to our national security. The Air Force systems acquisition process provides the equipment and weapons needed to meet these threats. Today, heavy demands stress our acquisition process. The post-Vietnam drawdown and subsequent underfunding of defense programs in the 1970s left us with weapons that were falling short of our needs. Throughout the 1970s the Soviets pursued a steady buildup of offensive forces—maintaining a substantial quantitative edge over the US and dramatically narrowing the qualitative advantage we held in deployed forces. Our current investment in more capable weapon systems, equipment, and munitions is imperative; we must maintain our edge in weapons technology to offset Soviet numbers.

Increased defense spending does place additional management responsibilities on the Air Force. The FY 86 budget for buying weapon systems is $46.6B. Even a small error in using these funds leads to unacceptable waste of scarce resources—taxpayers' dollars. Consequently, we constantly evaluate and improve our acquisition process. With the impetus of the Defense Acquisition Improvement Program the Air Force has instituted management improvements to control costs, increase stability, and increase competition at the prime and subcontract level.

Supporting the Administration's efforts to improve defense industry productivity, economies, and efficiencies, the Air Force is working on several initiatives under our Integrity and Management Improvement Program. An umbrella program for many existing oversight, cost awareness, and incentive programs, it has increased management emphasis for efficiencies at all levels of the Air Force. The program goal is to produce the most effective, combat-ready force possible.

Acquisition Initiatives.

As an integral part of an overall DoD program to improve the weapon systems acquisition process, several initiatives under way are producing significant savings.

Program Stability. The FY 85 Defense Authorization Act prescribes statutory tenure of not less than four years, or until completion of a major program milestone, for major system program managers (PM). Congressional purpose for the legislation is to promote stability in the DoD acquisition process. However, the primary effect will be to reduce personnel management flexibility regarding our key program managers, particularly with waiver authority at the service secretary level. As a practice, we have tried to make rotation dates for program managers coincide with major program milestones. Whether the law will improve program stability is uncertain, as many destabilizing factors exist outside the control of the program manager. However, the law, along with Air Force initiatives, such as program baselines and multiyear procurement, should collectively improve program stability.

Program Baseline. We have formalized the program baseline process and are using it successfully on several major acquisition programs. The baseline process defines key elements of an acquisition program for all participating Air Force commands and agencies. Once the program baseline is satisfactory, the participants agree in writing on a program's requirements, content, and approved funding. The signatories formally control and agree upon any changes to the approved baseline. The baseline process has improved program communications and has resulted in a better understanding of our acquisition programs among participating commands and agencies.

Multiyear Procurement. Multiyear contracting is one method the Air Force has used successfully to help stabilize selected programs. Since major multiyear contracting legislation was expanded in FY 82, the Air Force has started eight major contractual efforts that use this technique. The savings from these contracts approaches $3B. Of equal importance, these programs have been substantially free from disruptive changes during the multiyear contract term. Although we have reviewed our programs and elected to nominate no new major multiyear contract starts in FY 86, we do need continued approval for our existing multiyear contracts—B-1B aircraft production and spare parts, Navstar GPS satellite, KC-10 aircraft, DSCS III satellite, F-16 aircraft procurement, and the efficiencies they provide.

Quality Assurance. We are improving our quality assurance both in the near- and long-term. Quality workmanship will be only as good as we demand and we intend to be more demanding. Initially, we will emphasize two areas. We plan to make better use of "quality indicators" such as reject rates, removal rates, etc. Some quantifiable measurements already exist and we use them on selected programs. We will expand their use and make them available to top management who will use them as benchmarks to watch as closely as they now watch program cost, schedule, and performance.

We are also planning the use of hardware "tear downs" as an additional means of assuring quality. In a tear down, we systematically disassemble an item that has cleared all final inspections and tests, and assess how well it conforms to contractual specifications. This procedure serves as a check on the entire design and manufacturing process and can reveal workmanship and other product discipline problems.

Reliability and Maintainability. We continue to look for basic system changes that will ensure the most reliable, maintainable weapon systems possible for the dollar. Reliability reduces life cycle cost and means fewer spares, less manpower, and higher sortie rates. If systems are more maintainable, we need fewer people, thus reducing maintenance times. For example, the F-16A requires 19.5 maintenance manhours per flying hour while the older F-4E needs 41.4. Equally important, reliability and maintainability improve the mobility of our forces because we need to deploy fewer people and less support equipment. We have directed that reliability and maintainability now stand as coequals with cost, schedule, and performance as we bring new systems into the inventory and as we modify existing systems.

Realistic Budgeting. In calculating annual budgets, the Air Force routinely determines which costs are most likely to occur and then verifies them with independent cost analyses. These analyses have produced more refined cost estimates and more accurate inflation factor information. Because of several added programs, total costs have indeed increased. However, a program-by-program analysis shows that program costs decreased from 1981 to 1983 by $6B in then-year dollars.

Competition and Dual Sourcing. Expanding the use of competition continues to be a high priority for the Air Force. Our Competition Improvement Program and efforts to increase competition in the production phase of major weapon systems and spare parts are producing excellent results. We are increasing competition by dual sourcing and component breakout as well as encouraging prime contractors to expand competition among their suppliers.

COMPETITION CONTRACTING DOLLARS

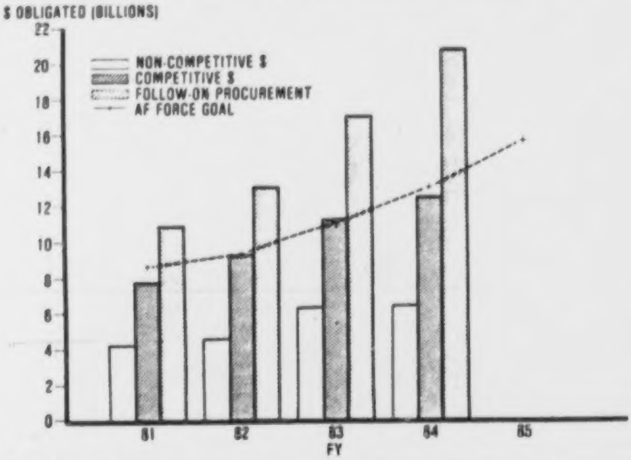


Figure 6

The Air Force Competition Improvement Program consists of competition goals, Command Competition Plans, and the Competition Advocate Program. We have established competition goals each year since FY 80 for our 15 major commands and separate operating agencies. For each of these organizations the commander establishes a three-year Command Competition Plan to achieve assigned goals. We have assigned more than 200 Competition Advocates at over 160 contracting locations throughout the Air Force to improve competition in the acquisition process. A new office of the Competition Advocate has been established and will be manned by a general officer and staff in the next few weeks.

We are using second sourcing, component competition, and subcontract competition to increase the use of competition in the production phase. We will compete a program whenever the projected quantities and economic return justify it. At the prime contract level, we are using second sources to produce the AIM-7, AIM-9, IIR Maverick, and GLCM. We are breaking out components for competition for a variety of subsystems and components, such as the F-16 canopy transparencies and wheels and brakes, as well as the Aces II ejection seat for the F-15, F-16, and the B-1B. We are also encouraging competition by our prime contractors with their vendors and suppliers. While Air Force competition statistics do not recognize this second level competition, it does generate the benefits of competition for major weapon system programs.

Specification Practices. In September 1984, we initiated a review of our specification practices on new acquisition programs and conducted an examination of specifications for selected fielded systems. The objective of the review was to identify areas for improvement to ensure that we do not over-specify our mission needs. Review results have been presented to our major commands responsible for system acquisition and logistic support. We plan to continue our evaluation of specification practices and look for ways to reduce unwarranted specification requirements.

Warranties. Over the past 20 years, we have negotiated various types of warranties, guarantees, and incentives designed to assure weapons system performance. We have been one of the innovators in the use of agreements such as correction of deficiency clauses, availability guarantees, reliability improvement warranties, and many others. These agreements are some of the many strategies available to the program manager to ensure that systems perform well and are reliable and supportable. Key to our success has been a policy of carefully selecting and tailoring the agreements to each specific circumstance. The KC-10, F-16, T-46, and Alternate Fighter Engine programs have benefited from these strategies.

A provision of the FY 84 DoD Appropriations Act dramatically changed this philosophy by requiring guarantees on all weapon systems. Today, before we award a contract for any weapon system, the contractor must guarantee both his materials and workmanship and acknowledge that he is financially responsible for repair or replacement of systems or components not satisfying the guarantee requirements. Implementing the Act on all weapons systems has been a challenge, but we are making progress. The FY 85 DoD Authorization Act revised the statute somewhat, adding additional flexibility. However, we still emphasize cost-effective guarantees that the using commands in the field can administer. Warranties are not free, and we need to know a warranty's total impact on a program.

Spares Management.

No single issue has received more attention this year than how we manage spare parts. Reports of what we've paid for spares—plastic caps, bolts, coffee makers—followed by revelations of premature parts disposal have raised questions about our ability to conduct business economically and efficiently.

Air Force people are working to make changes to our spares management practices. These initiatives represent "cradle-to-grave" reforms in spares requirements, acquisition, and inventory management processes. Four major Air Force studies identified the root causes of our problems and provided the basis for our reform effort.

CORONA REQUIRE was the initial study that addressed improvements in our ability to forecast replenishment spares requirements. The 26 major initiatives in the report said we needed to do three things: modernize data processing; manage weapon systems rather than items; and simplify and make more accurate forecasts. We have completed approximately 75 percent of the actions with the remainder predominantly automated data processing-related.

We've already begun to see improvements. Our forecasts are more accurate, allowing for more economical and responsive program execution. Further, Air Force Logistics Command has developed a system centered on weapons system management. They have discarded the old approach of measuring success by backorders and fill rates relying now on measures of merit that indicate our ability to support wartime taskings.

An **Air Force Management Analysis Group (AFMAG)** concentrated on analyzing the acquisition portion of the spares management program; the primary analysis focus was overpricing. AFMAG found that not enough competition, limited data, and ineffective pricing techniques led to pricing problems. AFMAG documented 68 findings and 178 recommendations for changes to the spares acquisition process. A General Officers Steering Committee, an Air Staff task group, and acquisition people at all levels are working to institutionalize these fixes. We have incorporated over 100 recommendations as of December 1984.

Actions resulting from the AFMAG have affected every aspect of the spares acquisition process. We are buying in larger, more economical quantities, consolidating orders, increasing competition and breakout, pricing items on value or "worth" basis, and using "should cost" pricing techniques. Our leading edge in these reforms is the Competition Advocate who helps increase competition, analyze prices, and challenge data rights.

We're working hard to develop a new cost consciousness among our employees. One of our major efforts is the **Zero Overpricing Program.** This program was instituted in March 1979 to encourage and reward Air Force people who identify and report items they suspect of being unreasonably priced. It represents our grass roots network to fight overpricing and simply recognizes that in this day of data automation, someone looking at and touching an item will identify price problems the computer may not.

The program is gaining momentum. From 2,700 challenges in FY 80 to 6,300 in FY 83 to almost 12,000 in FY 84, our people are clearly getting the message of individual responsibility for fair and reasonable prices. While statistics show only six percent of these challenges to be correct, we've realized $2M savings from them in the past 24 months. A strong incentive program reinforces this behavior. In addition to $110,000 in cash awards, we've given out over 3,500 letters of appreciation or commendation and over 100 other awards (three-day passes, etc.) during the same period.

Our concern about overpricing includes not only spare parts, but also support equipment. As a result of our **Support Equipment Acquisition Review**, we've taken an in-depth look at how we buy support equipment. Like spare parts, support equipment consists of numerous items normally purchased in small quantities to support and maintain a weapon system. This review recommended 107 management improvements in the area of requirements, planning, and pricing. Corrective actions began in November 1984.

Retention and disposal practices make up the final component of our reform effort. Ironically, it was our AFMAG-related movement towards larger quantity buys that caused us to investigate our spares retention and disposal practices. Disposal is the means by which we control item inventories that exceed our immediate need. We wanted to be sure we were retaining these parts even if they were excess to our current needs. However, GAO in 1977 and OMB in 1978 criticized DoD for holding parts too long in inventory and encouraged us to dispose of them more often, even if the item on which the part would be used was still in active service.

We discovered that complicated computer problems were frustrating intelligent retention decisions. To ease workload burdens on item managers, we built a computer network that automatically sent items considered excess to disposal. Only active intervention by managers could stop the process—that solution was deliberately drastic, but was unsatisfactory. We froze all spares disposal last March on most categories of serviceable or reparable items. We are reorienting our management philosophy and changing computer logic to require the item managers to start the disposal process. If the manager does nothing, the item remains. We are firmly committed to ensure our system wastes not a single dollar.

Air Force has over 400 individual initiatives in work that affect our spares and support equipment process and we are already seeing results. A review of our progress to date reveals a savings of approximately $575M in FY 84. These savings resulted from several factors, including increased quantity buys, expanded breakout and competition, greater emphasis on price challenges, and a more favorable economy.

Since we make more than 4.5 million individual purchasing transactions each year with 150,000 contractors, no one can say for sure we have not made a pricing mistake somewhere. What we can say is that we have instituted real changes to our acquisition system that should greatly reduce the chances we are paying too much for spares or selling needed parts.

Fraud, Waste and Abuse (FW&A)

Since May 1981, the Inspector General of the Air Force has been the focal point for our FW&A program. The purpose of the program is to prevent funds and resources from being diverted from defense to illegal, unauthorized, or wasteful purposes. The Air Force policy on FW&A is to use all available means to prevent, detect, correct, and discipline, as warranted, perpetrators involved in FW&A activities. Our primary focus is upon prevention before the resources are lost.

The Air Force FW&A program is an ongoing effort. During FY 84, we performed 1,882 audits and 1,530 inspections while the Air Force Office of Special Investigations (AFOSI) conducted 1,497 fraud-related investigations. We also received 947 hotline calls: DoD referred 562 and Air Force received 385. Air Force Inspector General organizations conducted 665 FW&A conference periods resulting in 157 FW&A allegations.

Defense Industrial Base

The defense industrial base produces and replenishes our warfighting systems and consumables, and its productivity, responsiveness, preparedness, and ability to mobilize are critical to the Air Force mission. We invest to maintain and improve our 14 government-owned and contractor-operated (GOCO) facilities and to modernize industrial capability through Manufacturing Technology (ManTech) and Technology Modernization (Tech Mod) programs. These programs establish new manufacturing processes, procedures, and incentives to improve productivity and capital investment. Both ManTech and Tech Mod return $10 long-term on our investment for every $1 spent. By making production more efficient, ManTech and Tech Mod make weapons less costly and release Air Force funds for other needs. In FY 86, the Industrial Preparedness Program Element totals $240M, including $106M for ManTech, $31M for Tech Mod, $60M for GOCO facilities, and $7M for industrial planning.

Contracting Out

We consider contracting, when consistent with national defense requirements, a workable and efficient means of accomplishing our workload. We continually evaluate Air Force workloads that do not require military or Air Force civilians to determine which is more cost-effective—contracting out or using in-house civilians. Currently the Air Force is performing 540 cost comparisons covering 13,086 authorizations. Since FY 79 we have completed 422 cost comparisons covering 11,539 authorizations. As a result, the Air Force contracts to commercial activities approximately 78,000 man-years or 24 percent of our civilian workload.

PART II - FORCES, PROGRAMS, AND CAPABILITIES

The Air Force is committed to performing the defense mission as efficiently as possible. Consequently, we carefully develop our programs to support the unified and specified commanders. We are also working hard to increase our joint warfighting capabilities with more joint exercises and inter-service cooperation.

In May 1984, the Chiefs of Staff of the Army and Air Force signed a memorandum of agreement on Joint Force Development. This agreement included 31 initiatives to improve interservice cooperation and our warfighting capabilities. We have made real progress implementing these initiatives. For example, the Air Force has cancelled development of the ground-based electronic warfare system, Comfy Challenge, because the Army is developing a system that can do that job for us. We are carrying our share of the burden by developing the Joint Surveillance and Target Attack Radar System—Joint STARS—to meet both Army and Air Force needs.

We are also working closely with the Navy. Weapon system acquisition initiatives are ongoing in combat identification and munitions research, development, test and evaluation. Today we are also training more and more with the fleet. Over 42 percent of all joint exercises last year involved maritime operations. In the recent Fleetex 85, we flew E-3 AWACS, KC-135s, F-15s, and B-52s to support the maritime mission. To improve joint training opportunities further, we are coordinating with the Navy on joint operation of training ranges, including the Navy's effort to establish a mobile sea range. The Air Force is committed to increasing interoperability with the Navy and to developing joint doctrine which will help improve our nation's maritime warfare capabilities.

The Air Force continues actively to plan and program our forces, strategies, and operations within a joint services operational context. We believe the evolution of the Department of Defense/Joint Chiefs of Staff structure, since its inception in 1947, has served our nation well. Senior service leaders, military and civilian, believe major revisions to this organization are not necessary. The current system continues to provide for unified, efficient forces.

STRATEGIC FORCES

The underlying principle of our national security policy is to deter war. Only with credible strategic forces can we convince our adversaries they cannot achieve their war aims and would suffer unacceptable losses if they started a conflict. Concentrated efforts over the past few years have begun to reverse the decline in strategic force effectiveness and flexibility we experienced in the late 1970s.

While restraint and negotiations rather than procurement and deployment characterized US efforts, the Soviets were rapidly expanding the quantity and quality of their strategic forces. Steadily, the strategic balance began to swing in their favor. Our restraint did not convince the Soviets to reciprocate. We are now, however, beginning to redress this imbalance through the President's continuing Strategic Modernization Program.

Soviet Force Development

The Soviets have been engaged in a determined, steady increase in strategic nuclear weapons programs over the last two decades. The expansion of these forces is a clear and growing danger to Western security.

Soviet ICBM improvements present a serious threat. The Soviet ICBM force consists of 1,398 launchers carrying over 6,000 warheads. The total payload of these missiles is about four times that of the US ICBM force. The Soviets have recently completed a modernization effort started in the mid-1970s in which they deployed over 800 SS-17, SS-18, and SS-19 missiles equipped with multiple, independently targetable reentry vehicles (MIRV). Over 600 of these MIRVed missiles—the SS-18s and SS-19s—have payloads which are comparable to or larger than our new Peacekeeper missile. The pace of Soviet ICBM modernization shows no sign of slackening. In fact, a new dimension will be added in the mid-to-late 1980s when mobile ICBMs join the existing force.

The Soviets are currently flight-testing two new solid-propellant ICBMs that may be deployed in silo and mobile modes. The SS-X-24 is a medium-sized missile that may be silo-deployed at first but appears designed for mobile deployment as well. The SS-X-25 is about the same size as Minuteman, and is a single-RV missile designed for deployment on a road-mobile launcher.

The trends toward hardening and mobility will add further to the imbalance in relative capability of US and Soviet strategic forces. Soviet ICBM silos and launch control facilities are hardened to the point that our current missiles have only limited capability against them. Without a credible US capability to threaten large Soviet ICBMs in silos, the Soviets will have little real incentive to abandon them in favor of more stable forces.

The Soviet sea-based ballistic missile force consists of over 60 modern submarines armed with 936 sea-launched ballistic missiles (SLBMs) carrying about 2,500 warheads. Two-thirds of this submarine force carries missiles that can reach targets in the United States from Soviet home waters. The Soviet ballistic missile submarine program has been vigorous: four times larger than the US production rate in recent years. They have built two Typhoon submarines—the largest submarine in the world—and three to four more are probably under construction. Each Typhoon carries 20 new SS-N-20 SLBMs, a solid propellant, MIRV-capable missile more accurate than any previous Soviet SLBM. The Soviets continue to build the Delta III submarine, and have started flight tests of a new SLBM, the SS-NX-23, that will probably replace the SS-N-18 currently carried by the Delta III.

Soviet sea-based land attack cruise missiles are also approaching operational status. The SS-NX-21 has a range of 1,600 miles and is small enough to be fired from a standard Soviet torpedo tube. Candidate launch platforms include the Victor SSN and two new submarine designs, the Mike and the Sierra. Another larger cruise missile design is also being developed and could be operational within two years. Both missiles will have nuclear warheads and will be capable of destroying hardened targets.

The importance of the manned bomber component of Soviet strategic offensive forces is increasing and will continue to be important for decades to come. A new variant of the Bear bomber, the Bear H, is in production and is designed to carry the first Soviet long-range land attack air launched cruise missile (ALCM), the AS-X-15. In addition, a new long-range bomber, the Blackjack A, will begin to enter service during the late 1980s. This bomber is similar to but larger than the US B-1, and should be capable of carrying several payloads, including cruise missiles. Also, the Soviets continue to build about 30 Backfire bombers a year.

Soviet strategic defenses are extensive, consisting of a dense nationwide air defense network designed to counter air breathing forces and a limited ballistic missile defense capability at Moscow. They are modernizing both of these defensive capabilities.

The Soviets are improving strategic surface-to-air missile (SAM) defenses, which already include nearly 10,000 launchers, by deploying SA-10, a surface-to-air missile designed to counter low flying aircraft and to have some capability against current cruise missiles. They continue to deploy the MIG-31/Foxhound, the first true lookdown/shootdown aircraft in the Soviet inventory. This aircraft has been joined by the MIG 29/Fulcrum. In the near future, the SU-27/Flanker—a more maneuverable fighter than Foxhound sharing its lookdown/shootdown capabilities—will also become part of the Soviet inventory.

When complete, the upgrades to antiballistic missile defenses around Moscow will include long-range modified Galosh missiles designed to engage targets outside the atmosphere and high-acceleration interceptors to destroy targets within the atmosphere. To control the engagements, the Soviets are building a large, phased-array radar at Pushkino. This ABM system will reach full operational status in the late 1980s. We are concerned that if the Soviets continue to develop engagement and guidance radars as well as above-ground launchers for high-acceleration interceptors, they could use them for a rapidly deployable ABM network that would fall beyond the limits of the ABM Treaty.

Strategic Triad

Our triad of ICBMs, bombers, and submarine-launched ballistic missiles is intended to provide the flexibility and capability to deter a Soviet preemptive attack and to complicate Soviet attempts to defend against a mixed retaliatory force. The triad deters because it ensures that our forces can respond to an attack by launching a credible counterattack. It also gives us maximum flexibility in employing our forces and provides a hedge against a technological breakthrough directed towards any one leg. This deterrent capability has served us well over the past 25 years and will continue to serve us in the future if we modernize and maintain the strength of each leg.

President's Strategic Modernization Program

The Air Force continues to implement the strategic modernization program as described by the President in 1981 and reinforced in 1983 by the Scowcroft bipartisan commission on strategic forces. Specific commission recommendations include: a) modernizing land-based ICBMs by deploying all 100 Peacekeeper missiles in existing Minuteman silos as well as developing and deploying a new small ICBM in a survivable basing mode; b) revitalizing the bomber force; c) continuing to improve sea-based forces with the Trident submarine program; and d) improving C^3 on a top priority basis. Key Air Force-managed elements of the modernization program are:

(1) Improve the land-based ICBM force step-by-step, reflecting the Scowcroft Commission recommendations.

(2) Modernize strategic bombers, including development and deployment of 100 B-1B bombers with an initial operational capability of 1986, vigorous R&D of a new Advanced Technology Bomber (ATB), and ALCM carriage for B-52G and H aircraft.

(3) Improve command, control, and communications systems to improve the survivability, coverage, and performance of systems that warn of attack and link forces to commanders.

(4) Improve strategic defensive systems to address an element of the strategic equation virtually ignored for over a decade.

We anticipate spending less than 15 percent of the annual defense budget on strategic forces over the next five years. (In the early 1960s, when we built many of the existing nuclear forces, the US spent over 20 percent of the defense budget on strategic programs.) These improvements will significantly strengthen nuclear deterrence and provide a sound basis for negotiating meaningful strategic arms reductions.

ICBM Modernization

ICBMs are an essential element of our strategic triad and have unique features not found in bombers or SLBMs. These qualities include high alert rates; rapid, redundant and high confidence command, control, and communications; highly responsive targeting flexibility; and low operating cost. Most important, ICBMs have excellent accuracy and prompt hard target destruction capability.

To ensure that a Soviet first strike against our land-based ballistic missiles would not prevent us from retaliating effectively, we need missiles that are more survivable and capable against Soviet hard targets. To address these needs, the US has embarked on an ICBM modernization program reflecting the findings of the President's Commission on Strategic Forces—prompt deployment of 100 Peacekeepers in existing Minuteman silos; development of a small, single warhead ICBM; and a basing technology development program.

Peacekeeper. The Peacekeeper is a four-stage ICBM carrying ten independently targetable warheads and having much greater targeting accuracy and flexibility than the present Minuteman system. Peacekeeper is an essential first step in modernizing the land-based missile leg of the US triad. Since the last US ICBM deployment (Minuteman III), the Soviet Union has deployed more than 600 modern SS-18 and SS-19 missiles with improved accuracy and payloads potentially as great as or greater than those planned for Peacekeeper. The Soviets, thus, can place our high-value hardened facilities—e.g., missile launch areas and control complexes—at risk. Our existing force does not give us a similar capability.

Peacekeeper's greater accuracy over existing US systems will help offset that imbalance. One hundred Peacekeeper missiles in existing Minuteman silos is a key element in the program recommended by the Scowcroft Commission, endorsed by the President, and approved by the Congress. Peacekeeper is in full scale development, with six of the 20 planned research and development flight tests already successfully complete. We have started production for first delivery in May 1986. The Peacekeeper program will cost $16.5B (FY 82$) to achieve an initial operational capability (IOC) of 10 missiles in December 1986 and full operational capability in 1989. Our FY 86 request will fund 48 missiles. Lack of continued support for this key system sends the wrong message to both adversaries and friends about our commitment to deterrence.

Small ICBM. The Scowcroft Commission noted that a single missile type in a single basing mode cannot fulfill all ICBM tasks. The small ICBM will improve the survivability of the US ICBM force, and its single warhead will offer a less lucrative target to the Soviet war planner.

Currently, the Air Force is completing the concept definition phase of small ICBM development. Many missile designs and relevant missile technologies are now being studied. In addition, we are emphasizing research on hardened road-mobile launchers since that basing mode appears particularly workable. Work is also continuing on developing and testing a hard-silo technology and limited deep basing. We will soon begin awarding contracts for the most promising small ICBM designs as we enter the pre-full scale development phase. Depending on how relevant small missile technologies and basing modes evolve, the small missile should enter full scale development in early 1987 and its first flight should occur in 1988, leading to a December 1992 initial operational capability.

Advanced Strategic Missile Systems (ASMS). We are pursuing technologies in key ballistic missile, reentry, and basing subsystems for possible operational ICBM applications. ASMS will provide timely solutions for potential ICBM force deficiencies, mission changes, and evolving threats by examining new technologies and concepts in preparation for full scale development (FSD).

Our highest ASMS priority is to develop a penetration aid system for Peacekeeper and Minuteman III to counter both upgraded Soviet ABM capabilities and any possible Soviet nation-wide violation of the ABM Treaty. This effort supports a rapid FSD and deployment of penetration aids, if required, and ensures US ICBM reentry vehicles (RVs) can penetrate upgraded Soviet ABM defenses. ASMS is also developing technologies to make advanced RV nosetips more accurate and survivable against Soviet ABM systems. We share ASMS technology development and expertise with the Army and Navy.

Minuteman. The aging Minuteman force requires increasing the resources we commit for its continued reliability. It is now over 22 years old, (well past its original design life); and under present planning, it will remain a key element of the US strategic deterrent posture for the foreseeable future.

To maintain and improve Minuteman reliability, supportability, and effectiveness, we are modifying and repairing the force. These changes include new C^3 systems, accuracy improvement programs, a better emergency power source, and repair of booster motors, missile guidance sets, and ground facilities.

Minuteman continues to be effective against most targets. Accuracy improvements coupled with the recent MK 12A warhead deployment program are geared toward maintaining Minuteman as an important element of the triad through the year 2000.

Bomber Modernization

The manned bomber remains the most flexible element of the triad. It can be redirected after launch, make real-time damage assessments during the attack, and be reconstituted for follow-on missions. The bomber can also carry many weapons, attack widely separated targets, and engage alternate targets by using aircrew and aircraft sensors to locate both nuclear and conventional targets.

The most effective strategic nuclear air-breathing force is a mixed force of penetrating bombers (employing gravity bombs and short-range attack missiles) and cruise missile carriers. This mix keeps the enemy planner from concentrating his defensive forces against one threat and makes him devote his resources to defense that he could otherwise spend on offense.

The Bomber Modernization Program is designed to counter projected Soviet defense improvements. President Reagan chose the B-1B to replace the B-52 in the near-term in its penetrating bomber role as well as to assure a manned penetration capability into the 21st century. The modernization plan calls for 100 B-1B aircraft with an initial operational capability of 1986. The President also directed the Air Force to develop the Advanced Technology Bomber (ATB) to deploy in the 1990s.

The B-1B and ATB are integral parts of the bomber portion of the President's Strategic Modernization Program. Each has an essential role in a time-phased effort to ensure we continue to place a wide range of Soviet targets at risk with our penetrating air-breathing systems. Once the ATB enters the inventory, B-1Bs will begin to assume a mixed cruise missile carrier and penetration role as well as other missions involving the use of conventional munitions. In the 1990s, a combined force of B-1Bs, ATBs, and B-52s with cruise missiles will place maximum stress on Soviet air defenses and provide the US with a flexible and more capable nuclear and conventional deterrent.

B-1B. The FY 81 Defense Authorization Act directed the Secretary of Defense to vigorously develop a strategic multi-role bomber which maximizes range, payload, and the ability to perform the missions of conventional bomber, cruise missile launch platform, and nuclear weapons delivery system in both strategic and theater roles.

The $20.5B (FY 81$) B-1B program is specific in its content and includes weapon system procurement, initial spares, and research and development. The four B-1B associate contractors are presently operating within budgeted costs on their fixed price contracts. They are meeting accelerated planning schedules, and that gives us confidence we will achieve a September 1986 IOC. The first production B-1B rolled off the line five months early and completed its first flight in October 1984—five months ahead of schedule.

The B-1B program remains ahead of schedule and within budget. Our FY 86 B-1B request of $5.99B includes funding for the multiyear procurement of the final lot of 48 aircraft, initial spares, and continued test and evaluation.

Advanced Technology Bomber (ATB). The Advanced Technology Bomber will extend the essential advantages of manned bomber weapons delivery into the twenty-first century. We have selected the prime contractor and key members of the ATB development team, and program start-up is progressing smoothly. While most details of this program are classified, the essential point is that the ATB will use low observable techniques to negate present and projected Soviet air defenses. The technologies involved represent a major technological advance of extraordinary military significance even though they are still in the early developmental stages.

B-52 G/H Modifications. The B-52 has been the backbone of the manned bomber leg of America's strategic triad for more than a quarter-century and will continue to play a major role in the bomber force structure as the B-1B and ATB join the active inventory. The B-52 role in conventional scenarios is becoming more important. Its long range and large, diversified payload provide a vital capability not found in any other present-day weapon system. For these reasons, we continue to program modifications to ensure the reliability, maintainability, survivability, and effectiveness of the B-52 force.

Major emphasis to date has been to add the Offensive Avionics System (OAS) and Cruise Missile Integration (CMI) (external ALCM carriage) to the B-52Gs and Hs. The OAS, a state-of-the-art digital system, replaces the 1950's technology analog bombing/navigation system suffering from low reliability and high support costs. Over one-half the B-52 fleet has been modified with OAS. The modification of 98 B-52Gs with external ALCM carriage capability is complete and we will start the first of 96 B-52Hs in January 1985 with completion scheduled for FY 90.

Other system improvements include electronic countermeasures (ECM), radar, autopilot, and environmental control system updates to meet the expanding enemy threat environment and improve effectiveness. In addition, 69 non-ALCM B-52Gs are being modified with a conventional stores management system; 30 of these 69 are also being modified to carry Harpoon anti-ship missiles.

F/FB-111 Modernization Program. The FB-111A fleet is also a key element of our strategic forces. The FB-111A can deliver weapons accurately at low altitude, at night, and in poor weather. Although it now has a nuclear mission, the FB-111A's conventional weapons capability matches that of the F-111s assigned to our tactical forces. Given the dual capabilities of the FB-111A, we will consider transferring these aircraft to the tactical forces as the ATB deployment draws closer. We plan to use the F/FB-111 force throughout and possibly beyond the 1990s. Whether the FB-111s remain in the strategic forces or move to tactical forces, we must modernize them for reliability and economic maintainability. Since all five models in the F/FB-111 family are similar in design, many modifications will be common to the entire fleet.

The FY 86 budget requests $308M for several modifications on both F and FB aircraft, including avionics modernization, engine work, and electronic countermeasure dispensers. We also need funds for avionics intermediate shops (AIS) to replace the current unreliable and costly test stations. The avionics modernization program (AMP) and the AIS program will significantly expand the capabilities of the F/FB-111 force.

Air-Launched Cruise Missile (AGM-86B) (ALCM)/Advanced Cruise Missile (ACM). The cruise missile is an effective weapon for attacking preplanned, fixed strategic targets. An accurate and survivable long-range weapon, the cruise missile increases bomber targeting and routing flexibility—reducing the exposure of our bombers to present and projected air defense threats. B-52Gs equipped with 12 external ALCMs became operationally capable in December of 1982. We now have five operational squadrons equipped with cruise missiles. We have also selected a contractor for the follow-on Advanced Cruise Missile (ACM).

Since January 1984, the ALCM has completed twelve flight tests: eleven successes and one failure (missile generator failure). Our objective remains to improve the survivability, range, and accuracy of the ALCM to respond to the projected Soviet threat. The $41.9M requested in FY 86 is for ALCM support equipment.

Short-Range Attack Missile II (SRAM II). The SRAM II, formerly called the Advanced Air-to-Surface Missile (AASM), will give the B-1B and Advanced Technology Bomber a modern Short-Range Attack Missile (SRAM). SRAM is a supersonic, air-to-ground nuclear weapon that can severely degrade Soviet defenses. The trend toward harder and increasingly mobile targets demands that we make additional performance improvements.

The SRAM II program is designed to provide a state-of-the-art weapon, based on more than a decade of experience with SRAM. We have structured the program to meet the inventory demand in the shortest possible time. By using existing technology, we can make significant performance improvements without introducing unacceptable technical risk into the program.

Our SRAM II acquisition strategy emphasizes competition, and we will also incorporate advances in low observable technology, navigation systems, propulsion efficiency, and system accuracy. SRAM II will make the penetrating bomber more flexible by giving it one weapon that can strike many targets. We plan to begin full scale development in early FY 86, which will lead to an initial operational capability in FY 92.

Common Strategic Rotary Launcher (CSRL). The CSRL is a multipurpose launcher designed for the B-52H, B-1B, and Advanced Technology Bomber (ATB). The launcher will accommodate gravity weapons, short-range attack missiles, and cruise missiles. It will also carry future conventional standoff munitions. Initially, the CSRL will carry cruise missiles internally on the B-52H and the B-1B. We believe CSRL is the most cost-effective alternative because it reduces a proliferation of launchers for our bombers. We will procure CSRLs for the B-52H and then transfer them to the B-1Bs.

CSRL competition was completed in June 1983 and we awarded a contract to the Boeing Military Airplane Company. The full-scale development program is on schedule and flight testing on the B-52H begins this August. CSRL initial operational capability on the B-52H will be in early FY 90. Funds are requested in FY 86 for the initial quantities of B-52H carrier aircraft kits and CSRLs.

Command, Control, and Communications (C^3)

Strategic Command, Control, and Communications (C^3) supports the credibility of our strategic deterrent posture. The systems link the National Command Authorities (NCA) to senior force commanders and command centers. It also links our tactical warning and defensive forces and our strategic retaliatory forces to the command centers and to each other. This system assures national policies and defensive strategy are executed promptly and directly. Strategic C^3 must be reliable and effective from peacetime crisis periods up to and including nuclear war. It must also function in concert with our general purpose forces. Our command, control, and communications systems should provide high confidence, unambiguous, timely warning and attack assessment information to the NCA.

In the past, we have not modernized our C^3 systems fast enough to counter the growing Soviet threat. Consequently, upgrading our C^3 systems is one of the highest priorities of our strategic modernization program. Our objective is to make sure these systems are as robust as the forces they support. Capabilities like the Ground Wave Emergency Network (GWEN) and the Milstar satellite system will give us a survivable way to alert and activate our nuclear retaliatory forces.

Installing GWEN and satellite terminals, coupled with base command post hardening, will improve strategic connectivity. In the CONUS, GWEN will greatly reduce jamming threats and effects of high altitude nuclear bursts. Milstar will extend this resistance to jamming and nuclear effects to provide connectivity worldwide.

Milstar will use extremely high frequency (EHF) transmissions to provide worldwide, anti-jam, survivable connectivity before, during, and after a nuclear attack. Milstar will complement the Air Force Satellite Communications (AFSATCOM) system and Navy Fleet Satellite Communications (FLTSATCOM) system by assuming the communications missions that require enduring jam-resistance, hardness, and survivability.

Other C^3 improvements include improving the coverage of worldwide high frequency (HF) radio stations. New state-of-the-art HF equipment with the capability for future improvements will replace present airborne HF radios. In addition, the E-4B National Emergency Airborne Command Post is being upgraded to make it more capable, survivable, and reliable so the National Command Authorities (NCA) can effectively command and control our strategic forces.

Strategic Defense

Strategic defensive forces provide our NCA with the capability to posture other forces for survival, limit damage from atmospheric attacks, and respond appropriately to the nature of the attack. To improve strategic defense we are modernizing our continental air defense forces and continuing support of PAVE PAWS SLBM phased-array radar systems and over-the-horizon radar systems for better tactical warning. We are also developing, in consonance with the President's Strategic Defensive Initiative, several technologies that could provide a comprehensive strategic defense by the turn of the century if future administrations decide to proceed with deploying operational systems.

Air Defense Master Plan. The North American Air Defense Master Plan (ADMP) addresses our requirements and force structure for attack warning, attack assessment, damage limiting response, and airspace control. Throughout the development of this plan, we have consulted with our Canadian defense counterparts in the spirit of responsibility sharing. The major strategic defense improvements recommended in the ADMP include: improving day-to-day warning and attack assessment capability with Over-the-Horizon-Backscatter (OTH-B) radars and state-of-the-art ground-based microwave radars; and improving intercept capability and active defense by updating our air defense squadrons with F-15s and F-16s.

Air Defense Interceptor Modernization. Fighter interceptor aircraft assigned to atmospheric defense include F-15s, F-4s, and F-106s. The responsibility for the mission is shared by both active and Guard units. The Air National Guard will man 11 of the 15 air defense squadrons by FY 86.

We must modernize the interceptor force to counter the changing air breathing threat to North America. The Soviets are replacing their strategic aircraft carrying gravity bombs and short-range, air-to-surface missiles with cruise missile-carrying bombers and submarines. To combat this threat, we need long-range interceptors with a large search volume radar and look-down, shoot-down capability. The F-15 satisfies these requirements but, because we will be buying fewer than originally planned, will not be available for most interceptor squadrons. The remaining units will be equipped with F-16 A/B aircraft, a major improvement over current F-4 and F-106 aircraft, beginning in FY 87.

Ballistic Missile and Atmospheric Threat Warning. The credibility of our nuclear deterrence depends on our ability to give clear, timely, reliable, and survivable warning and assessment of any enemy attack.

Ballistic missile attack warning and attack assessment is provided by space-based systems; three Ballistic Missile Early Warning System (BMEWS) sites; the Perimeter Acquisition Radar Attack Characterization System radar near Grand Forks AFB, North Dakota; the Eglin AFB, Florida, AN/FPS-85 radar; the MacDill AFB, Florida, AN/FSS-7 SLBM radar; and two PAVE PAWS SLBM phased-array detection and warning radars located on the East Coast at Cape Cod Air Force Station, Massachusetts, and on the West Coast at Beale AFB, California.

We are now upgrading several of these systems, and are also improving satellite survivability. Our program to upgrade the Thule, Greenland, BMEWS site with a new phased-array radar remains on schedule with a projected operational date of late 1986. This new system will track more objects and predict impact more accurately. A similar upgrade will begin at the Fylingdales, England, BMEWS site in 1986.

We are also going ahead with two additional PAVE PAWS phased-array radar sites at Robins AFB, Georgia, and near Goodfellow AFB, Texas. Both efforts are well under way and will become operational in FY 87. Completing these new PAVE PAWS sites will substantially improve SLBM tactical warning capability and allow us to close two older, less capable, and more expensive-to-maintain radar systems. In FY 86 we are requesting $123.8M in RDT&E and $457.7M in procurement funding for these sensor systems.

Atmospheric defense of North America has long been a cooperative Canadian-US effort, and surveillance and warning systems are configured to control access to North American airspace. The surveillance system is composed of ground-based radars in the Distant Early Warning (DEW) line, the CADIN-Pinetree system in southern Canada, and the Joint Surveillance System (Federal Aviation Administration and military joint use radars in Alaska and the continental United States).

To upgrade the system to meet northern surveillance requirements, we will replace obsolescent DEW line radars with a mix of 52 minimally attended and unattended radars. This upgrade will improve radar performance and low altitude coverage and reduce operating costs.

To extend coastal surveillance coverage beyond the limit of the Joint Surveillance System radar, we will build long-range Over-the-Horizon Backscatter (OTH-B) radars on the East and West coasts. Central US and Alaskan OTH-B radar systems will complete wide area surveillance in defense of the North American continent. These radars will cover all altitudes and give early warning of hostile intruders out to approximately 1,800 miles. Funding for OTH-B and improved DEW line in FY 86 is $366.7M and $53.4M, respectively. To provide survivable command and control in wartime, AWACS aircraft are available to NORAD.

Strategic Defense Initiative (SDI)

For more than three decades, US national security has depended on the deterrent effect of our strategic forces. We depend almost totally on the retaliatory capability of the strategic triad to inhibit a first strike by an aggressor. In March 1983, President Reagan established a national objective of seeking ways to reduce significantly that dependence and increase "the contribution of defensive systems to our security and that of our allies." The result of that challenge is the Strategic Defense Initiative—a technology research effort to develop a base for informed future decisions about strategic defense.

The SDI program covers many technology programs: surveillance; target acquisition; tracking and kill assessment; directed energy weapons; kinetic energy weapons; battle management programs; command, control, and communications; survivability; lethality; and target hardening, as well as selected support systems research. If warranted, and a future President and Congress decide to do it, full scale engineering could begin in the early 1990s, followed in subsequent years by anti-ballistic missile deployments. The SDI will also provide us the flexibility to respond to potential Soviet strategic defense developments. While the SDI focuses primarily on the ballistic missile threat, we are also examining requirements to counter bomber and cruise missile threats. Developing and deploying strategic defenses could significantly improve deterrence and stability for both the US and our allies.

The Air Force supports and is deeply involved in SDI—one of the most important technological programs the nation has undertaken. It is not a deployment program, however. Nor is it a substitute for our current arms control and reduction efforts or the modernization of our strategic and intermediate range nuclear and conventional forces. SDI aims to use America's greatest assets—creativity and ingenuity—to investigate how the awesome threat of nuclear-armed ballistic missiles may be reduced. The Air Force share of the FY 86 SDI request is $1.4B (38 percent of the total DoD request).

Space Defense Systems

The Air Force Space Defense Systems Program (SDSP) supports antisatellite (ASAT), space system survivability, space surveillance, and associated C^3 capabilities. The program responds to the Secretary of Defense's January 1978 guidance and July 4, 1984 National Space Policy endorsing a comprehensive US space defense capability "at the earliest practical date."

Space system survivability involves prototype systems, subsystems, technologies, and operational procedures for space systems (satellites, data links, and ground elements) which are more survivable against ground, air, and space threats—conventional, nuclear, and electromagnetic.

Space surveillance involves upgrading existing Space Detection and Tracking System (SPADATS) capabilities and developing near real-time, space-based, long wavelength infrared (LWIR) sensors with autonomous on-board processing. The Space Based Space Surveillance (SBSS) system was incorporated into the Strategic Defense Initiative's Space Surveillance and Tracking System (SSTS). SSTS will monitor objects and events in space and give warning as well as perform midcourse surveillance and tracking of ballistic missiles and RVs needed to support the President's SDI technology program.

Space defense C^3 will provide the communications and command center capabilities necessary to integrate and control the other space defense segments. Using inputs from the Space Detection and Tracking System (SPADATS) and the Intelligence Community, the Space Defense Operations Center (SPADOC) will assess the situation in space; warn the NCA and satellite operators and users of satellite attack; provide targeting and strike assessment for the US ASAT; and help assess and disseminate survivability responses. SPADOC and the ASAT Mission Control Center (MCC) will be located in the NORAD Cheyenne Mountain Complex.

ASAT. The US ASAT responds to the threat posed by the operational Soviet ASAT system and operational Soviet reconnaissance and surveillance systems that provide information to Soviet combat forces. This Soviet threat has raised the prospect of a Soviet military advantage in space. The US ASAT capability will deter threats to space systems of the US and its allies and, within limits, deny any adversary the assured use of space-based systems to support hostile military forces.

The ASAT is an air-launched antisatellite missile program consisting of a modified SRAM first stage, a modified ALTAIR second stage, and a Miniature Vehicle (MV) warhead. We will launch ASATs from designated air-defense F-15s. In FY 86 we will continue development and testing for the ASAT program, start development of the Mission Control Center at NORAD Cheyenne Mountain Complex and construct facilities at Langley AFB, Virginia, for storage, maintenance and operations.

The Air Force successfully completed an ASAT flight test on January 21, 1984 that demonstrated we could deliver the ASAT missile to a pre-determined point in space. A subsequent test, in November 1984, demonstrated some of the capabilities needed to acquire and track objects.

Arms Reduction

The Air Force strongly supports negotiations aimed at arms reduction agreements that directly improve our national security. Arms control helps maintain the US deterrent, but is not a substitute for US military preparedness. Sound arms control measures, however, can help limit the threat, reduce uncertainties, constrain strategic program costs, and make allocating critical resources more manageable.

While vitally interested in reducing the risk of war and supporting meaningful and verifiable arms reductions, we do not believe, as do some advocates, that a "freeze" at current levels would be beneficial. Far from promoting peace and security, a freeze would increase the danger by locking the US into a position of military disadvantage. It would prevent us from correcting existing deficiencies in US nuclear forces caused by the sustained Soviet buildup during a period of limited US modernization, and would open the door to possible Soviet coercion based on their clear superiority in deployed ICBM systems.

READINESS AND SUSTAINABILITY

Our forces must be ready for combat at any time. Peacetime readiness helps deter combat, and is critical to a successful response should combat be necessary. Readiness exists when forces, units, weapons systems, or equipment can accomplish their missions. It is achieved with realistic operational training and ensuring each unit has enough spare parts and qualified people to begin combat.

We also need wartime sustainability. We can neither know when a conflict will come nor be sure how long it will last. Sustainability is the ability of our forces to fight during and beyond the initial period of combat; it is having enough spares, supplies, munitions, and fuel. Our forces need the proper mix of well-maintained, capable equipment as well as trained, dedicated people. They should be supported by adequate repair facilities, spare parts, and stocks of effective munitions from beginning to end of hostilities. During the last few years we have emphasized improved near-term readiness and combat capability, and that has gone a long way toward solving these deficiencies; however, we need to continue.

In the FY 86 budget submission, we have again placed a high priority on improving the combat readiness as well as the staying power of our forces. Our FY 86 funding will enable us to continue increasing spare parts stocks and equipment inventories for our mobility and tactical forces. We will also continue to improve our inventory of modern munitions, increase operational flying hours, and train more effectively.

We have made progress in improving the quality and realism of operational training programs. Initiatives such as Red Flag and Dissimilar Air Combat Training continue to increase the readiness of our operational crews. Major exercises and numerous deployments of active, Guard, and Reserve units to overseas operating bases have given operations and maintenance people realistic experience in the environment in which they might fight. This improved training, additional flying hours, and more experience produced another excellent safety record. In 1984, our accident rate was 1.77 mishaps per 100,000 flying hours. This flying safety record again reflects the positive effects on combat forces when readiness initiatives such as increased flying hours, spare parts, and realistic training are properly funded.

Operations and Maintenance (O&M)

The Active O&M account is crucial to the readiness and sustainability of the Air Force. This account represents 19 percent of the total FY 86 Air Force budget request. We use O&M funds to buy fuel and parts for aircraft, missiles, and vehicles; maintain runways and facilities; operate the physical plants; perform depot maintenance on weapon systems; train and provide health care to people; and pay civilian employees.

The O&M account is sensitive to unprogrammed and unbudgeted fact-of-life expenditures. Historically, this account has absorbed such things as National Command Authority taskings (e.g., Lebanon and Grenada), unbudgeted rate increases, overseas inflation, and congressional directives (in FY 83 O&M absorbed 25 percent of the civilian pay raise and the increase in cost for health benefits and medicare). When these expenditures are substantial, these unforecast increases consume much of the programmed growth in O&M. The result: degraded readiness and sustainability.

The active O&M portion of the FY 86 budget is $20.9B—approximately $1.5B or 8 percent real growth over FY 85. This growth includes: space programs, $224M; central supply and maintenance activities, $371M; flying hour-related increases, $25M; communications, $44M; and civilian personnel authorizations, $173M. Figure 7 shows how O&M funds are divided among the activities in approximate percentages.

FY86 ACTIVE OPERATIONS AND MAINTENANCE BY COMMODITY

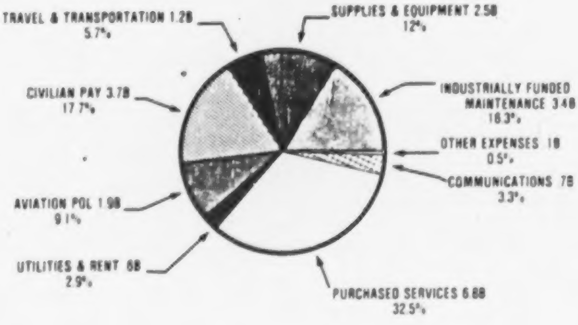


Figure 7

Readiness Training

Well-trained people are essential to maintaining a combat advantage. We need to train our crews and combat support people aggressively and realistically to make full use of their equipment and to sustain planned wartime sortie levels. The Air Force trains as we would fight—jointly with the other services and our allies—so we can operate effectively together on the battlefield.

Exercises. We continue our commitment to aggressive and realistic training. Our crews are training on weapon ranges against simulated enemy defenses, practicing with allied airmen, and flying in the environment in which they would fight. Red Flag exercises give crews peacetime experience in a realistic mock warfighting environment. During Red Flag exercises, our aircrews—including Guard and Reserve units—mobilize at their home base, deploy to Nellis AFB, Nevada, and stage operations out of airfields in the Nellis area. Crews fly against simulated enemy aircraft and ground-based defenses and deliver live munitions on mock enemy targets.

Since we plan to fight as part of a combined, multi-service force, joint exercises with the other services are particularly valuable. Through the JCS exercise program, we gain considerable experience in deploying and employing forces under the joint operational command arrangement we would have in wartime.

The Air Force is committed to increasing interoperability with the Navy to improve our maritime warfare capabilities. Over 42 percent of all joint exercises last year involved maritime operations. In the most recent Fleetex 85 exercise, we flew aircraft in surveillance, anti-ship, and mining roles.

Deployments. Our training programs include deploying active, Guard, and Reserve units to overseas locations where they familiarize themselves with deployment bases, work with our allies by flying in multi-national exercises, and experience the local weather and terrain. These deployments continue to provide valuable, realistic training for our people.

Flying Hour Program. The Air Force Flying Hour Program is designed to meet aircrew requirements for a responsive and ready force. The training and readiness of aircrew members is the core of the Air Force mission.

We have consistently flown to within one to two percent of the flying hour program despite shortfalls in the Peacetime Operating Stocks (POS) accounts that support day-to-day flying. Of particular significance is the continued incremental flying hour growth in the tactical fighter program. Starting in the early 1980s, we have increased fighter flying hours each year to accommodate both force structure growth (more aircraft and crews) and readiness growth (the amount of time we fly each crew member). In FY 86 we have programmed some growth in the KC-135 program due to high demand for air refueling. To support these programs, we request funding of 2.44 million hours in FY 86, a 3.3 percent increase over FY 85.

NGT/T-46A. The T-46A will replace the aging T-37 in all USAF training roles (including Undergraduate Pilot Training, Undergraduate Navigator Training, and Accelerated Copilot Enrichment for Strategic Air Command). The Air Force is also tentatively planning to replace the T-37 with the T-46 in the Euro-NATO Joint Jet Pilot Training (ENJJPT) program at Sheppard AFB, Texas, in the early 1990s. The T-46 will be a side-by-side seating, twin engine, pressurized airplane using off-the-shelf equipment when possible. The turbofan engines and airframe technology will be state-of-the-art to reduce development risk and to ensure a fuel-efficient training system.

The first production aircraft is scheduled for delivery in April 1986 leading to IOC (defined as the start of student pilot training) in January 1988. We are requesting $222M in FY 86 to procure 33 aircraft.

Aircrew Simulators. Aircrew simulators are an integral part of aircrew training and complement flying training. We use simulators to train flight safety tasks requiring repetition or flight conditions that are difficult or not prudent in an aircraft. Normal, emergency, and instrument procedures, as well as crew coordination, are well suited to simulator training. We also use simulators to train those warfighting techniques we cannot cover in the aircraft because of restricted equipment, range, or airspace.

In FY 86, we have budgeted $158M to develop prototype simulators for new aircraft such as the F-15E and the C-17. Production programs totaling $440M will produce B-1B, T-46, F-15, F-16, A-10, and C-130 simulators.

Logistics

Logistics consists of support equipment, spare parts, munitions and fuels, as well as the maintenance needed at the outbreak of hostilities to sustain our combat forces until the industrial base can mobilize. Our logistics objectives reflect preparedness for a prolonged conventional conflict and the need for enough war reserves to stay and win. The three major components of logistics sustainability are aircraft replenishment spares (including stock fund repair parts), munitions, and aviation fuel.

Replenishment Spares. Aircraft replenishment spares are a unique commodity since additional spares are not readily available even in the event of war. In peacetime, these parts generally take two or more years of lead time to buy. This time delay results from a small defense industrial base, not enough skilled people, critical reliance on strategic materials, and having to support both old and new aircraft technologies. The FY 86 $3,786M budget for replenishment spares helps improve readiness and sustainability. Peacetime Operating Stocks (POS) and War Readiness Spares Kits (WRSK) are fully funded at $2,396M and $1,150M respectively with $240M applied to Other War Reserve Materiel (OWRM).

The FY 86 spares funding requirement is $2.8B lower than the $6.6B projected in the FY 85 President's budget because Air Force and DoD initiatives have achieved better efficiency, while lower inflation rates and a more competitive industrial environment are paying big dividends. This reduced funding request does not mean we are buying fewer spares, only that we are paying less for them.

Munitions. The FY 86-90 munitions program builds new weapons inventories at a rate consistent with production capability and inventory objectives, and maintains a warm production base where possible. The FY 86 budget will allow us to support 63 percent of the total sortie requirement with optimum munitions when those funded munitions are delivered. We buy fuzes and retarding devices and low-level laser guidance kits to make general purpose bombs more effective. Self-defense chaff and flares complement other electronic countermeasure equipment and improve aircraft survival rates in combat. The USAF capability to support sorties with the best munitions (munitions designed for specific targets) will increase to 78 percent when looking at fielded capability in FY 90. Throughout the Five Year Defense Plan we continue to support all required sorties when general purpose munitions are considered. However, mission effectiveness degrades without optimum loads. (The Theater Forces section covers individual munitions.)

Combat Capability

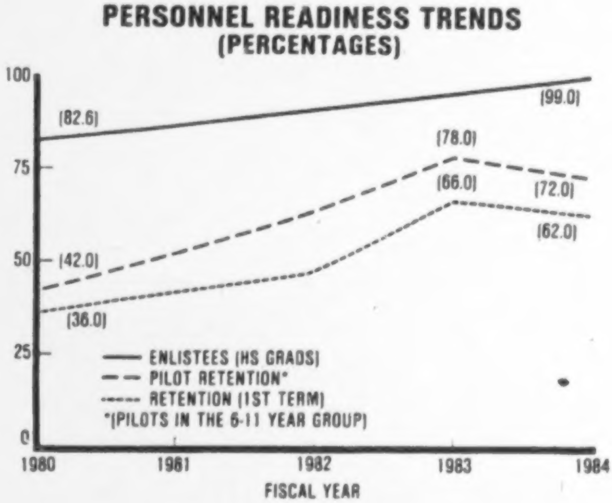
Congress and the media have recently focused on the issue of armed forces readiness. Both particularly referenced a 15 percent decrease in flying units reporting fully or substantially combat ready (C-1 and C-2) between 1980 and 1983. The accusations implied the services were unable to improve combat readiness even with increased funding. The measure used to make this case was the C-rating system, which addresses only a portion of combat capability. - Despite continuous DoD and service efforts to set the record straight on readiness, this subject remains a source of contention.

To understand this crucial issue properly, we must look beyond a single measurement system designed to track only one narrow aspect of combat capability.

C-ratings provide only the status of unit capability with personnel and equipment on hand at a specific point in time. They do not depict qualitative improvements in weapon systems, training, or people that translate to greater real combat readiness and capability. For example, an F-15 unit rated C-2 may in reality have more combat power than an F-4 unit rated C-1. Also, since we periodically change the criteria for ratings, they are useful only for comparing short term readiness changes.

The Air Force has significantly improved real combat capability by evenly increasing our balanced readiness, sustainability, and force structure, as well as modernizing our forces. With people, improvements in quality, retention, and pay have measurably helped produce a more ready force. Some typical improvements which occurred between 1980 and 1984 are reflected in Figure 8.

Figure 8



We have increased combat effectiveness by buying new fighters (A-10, F-15, F-16), modifying our KC-135 tankers, and adding KC-10 refueling and cargo aircraft. In addition, new, improved weapons have given our combat forces a qualitative edge. Figure 9 (following page) depicts some of the major equipment improvements and the resulting capability increases.

Training readiness has benefited significantly from increased flying hours and more realistic and effective wartime training missions. The largest growth in flying hours has been in tactical fighter weapon systems. Participating in realistic training exercises such as Red Flag and training at wartime beddown locations gives our aircrews (fighter, bomber, tanker, airlift, etc.) quality training and the maintenance and support forces the opportunity to train as they will fight. Figure 10 reflects some key training improvements over the past four years.

EQUIPMENT READINESS TRENDS

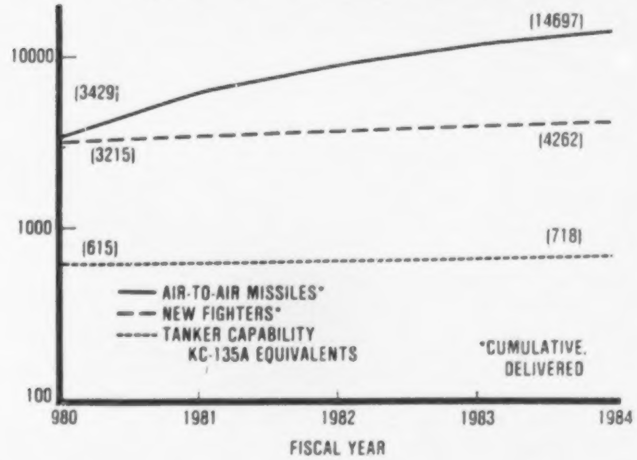
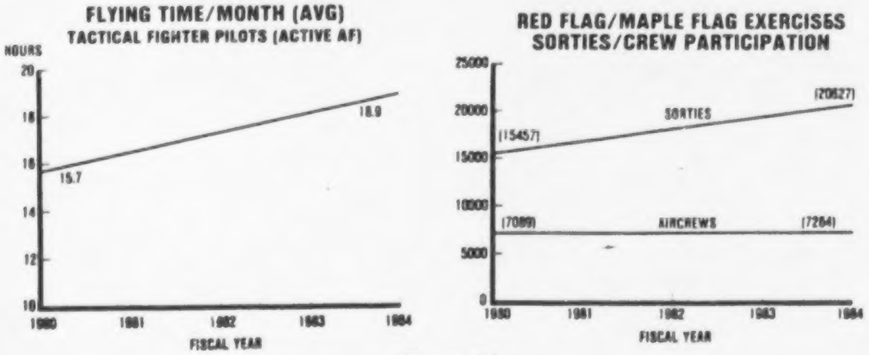


Figure 9

In summary, our crews are flying more—11 percent increase overall, 20 percent in tactical fighters, growing to 22 percent in FY 85. Training programs are more realistic and crews more frequently train under realistic conditions. Tactical fighters can fly 76 percent more combat sorties because of better spares support and force structure growth. Overall strategic airlift capability has increased 28 percent since FY 80 and our ability to surge and sustain our C-5 and C-141 aircraft has improved 64 percent because of fleet modifications and more spares. Sixty-seven percent of today's fighters are modern A-10s, F-15s, and F-16s, and that translates into better weapons delivery. Air Force capability has improved significantly and will continue to improve as the field receives the additional equipment we bought with our increased funding since 1981.

AIRCREW READINESS TRENDS


FLYING TIME/MONTH (AVG)
TACTICAL FIGHTER PILOTS (ACTIVE AF)

RED FLAG/MAPLE FLAG EXERCISES
SORTIES/CREW PARTICIPATION

Figure 10

Air Base Survivability (ABS) and Point Air Defense (PAD)

ABS is an umbrella program that involves new Air Force programs, upgrading current capabilities, integrating ongoing programs, and other improvements. These programs range from camouflage, concealment, and deception, to facility repair capabilities and chemical defense. In concert, these efforts underwrite our investments in readiness, sustainability, modernization, and force structure. ABS helps airpower resume operations otherwise grounded after an attack.

As a result of the Army and Air Force Memorandum of Understanding (MOU), the Army will be responsible for ground-based PAD at both Army and Air Force installations. The Air Force will submit its point air defense requirements to the Army and participate as the Army develops follow-on systems. Aside from existing Air Force programs (e.g., Stinger, Rapier), Army will fund further efforts. Our FY 86 request contains $7.6M for Rapier procurement.

We are building semi-hardened storage facilities to protect key sortie generation resources as well as storage facilities to keep ABS-related equipment from deteriorating. While some Air Force requirements in Europe for better ABS are NATO infrastructure-eligible and will be satisfied by that program, many others in Europe (and worldwide) remain national responsibilities. Hardened logistics, chemical-biological protection, and storage for ABS-related equipment are examples. The Theater Forces chapter addresses chemical-biological protection in more detail. For FY 86, we are requesting $395.4M for ABS programs.

Host Nation Support (HNS)

HNS includes those services that allied nations provide to US forces deployed in support of overseas defense commitments. The goal of Wartime HNS (WHNS) is to ensure that critical wartime logistics support is available for forward deployed and reinforcing US forces without further straining US lift and support resources. It improves combat readiness by reducing the need to deploy US logistic support units.

The Transatlantic Bargain established at the 1978 NATO Summit called for an increase in US reinforcements to NATO if the allies would increase their level of support. In 1980, the US identified long-term, time-phased HNS logistic requirements and gave them to host nation Ministries of Defense. These initiatives resulted in signed Statements of Principle with Belgium, The Netherlands, Luxembourg, and the United Kingdom that indicate their willingness to increase support of US forces in wartime.

On April 15, 1982, the US and Germany signed a WHNS Agreement that creates new units in the Bundeswehr Reserve which, upon mobilization, would be dedicated to the wartime logistics support of US combat forces. German support people will assist with airbase security and airfield damage repair, and augment Collocated Operating Base (COB) support and medical evacuation. Under the cost-sharing formula that supports the agreement, the US pays for civilian salaries, procurement of unit equipment, and annual operations and maintenance. The FY 86 budget request includes $19.3M for the USAF portion of HNS agreements.

Medical War Readiness

The mission of the USAF Medical Service is to keep Air Force people healthy so the Air Force is ready and able for combat. The Medical Service also provides (as much as it can) a peacetime health care system for beneficiaries. To fulfill that mission, the Surgeon General has six major Medical Service priorities: sustained medical readiness; effective quality assurance and risk management programs; improved accessibility of care; increased productivity; expanded beneficiary services; and delivery of care with compassion. Meeting these priorities will increase the Air Force's capacity to deliver health care to military beneficiaries and lessen its dependency on the more costly CHAMPUS alternative.

An aggressive war reserve materiel procurement program has purchased fifteen 500-bed contingency hospitals; seven hospitals have already been delivered and positioned in the European theater. By the end of FY 85, we will have 44 percent of required contingency hospitals in place. All theaters continue to receive increasing stocks of medical materiel for their war reserve programs. Through FY 86-90, we will procure 91 percent of the medical materiel requirement. Our FY 86 request of $151.1M buys four 500-bed contingency hospitals, two 250-bed aeromedical staging facilities, and twenty-four second-echlon (emergency treatment) units.

Defense-Wide Command, Control, and Communications (C^3) Support

To use our combat potential fully, we must integrate individual units and weapon systems into a single fighting force. To do that, we need secure, survivable C^3 systems. The defense-wide C^3 system includes programs to provide command and control, logistics, intelligence, navigational, and other support communications for peacetime and wartime. It does not include service-unique systems. Key programs and their FY 86 funding levels include $165.5M for the Air Force portion of the Defense Satellite Communications System, $58M for the Interservice Agency Automated Message Processing Equipment Program, $503M for the Joint Tactical Communications Program, and $89M for the Air Force portion of the joint Worldwide Military Command and Control System Modernization.

FORCE PROJECTION

The United States must be able to deploy, employ, and sustain combat forces rapidly to protect vital US worldwide interests. The visible means and will to project military power can deter potential adversaries from acting hostile to our interests. Timely force projection can also be a stabilizing factor in preventing small crises from escalating into larger conflicts. Consequently, we are building a flexible mix of airlift and refueling assets that will significantly increase the ability of the US to protect our worldwide interests.

The Congressionally Mandated Mobility Study (CMMS) concluded that programmed mobility capability could not meet current or projected requirements. To remedy this shortfall, the study recommended a balanced program of airlift, sealift, and strategically prepositioned equipment and supplies. The CMMS further recommended building an airlift force capable of providing a minimum objective of 66 million ton miles per day (MTM/D) intertheater cargo airlift capability, with one-half of the increased airlift capable of handling outsize cargo (e.g., fighting vehicles, self-propelled artillery, air defense systems, helicopters, and communications vans). A 66 MTM/D airlift force was the basis for the DoD Sealift Study, which determined objectives for both sealift and prepositioning programs. The defense planning guidance established the 66 MTM/D airlift force as a long-term objective.

Airlift requirements have grown because of five factors that have evolved over the last decade:

- Improved Soviet capabilities have decreased warning time, placing a premium on bringing US power to bear quickly
- Increased hostile Third World activities, and geographic remoteness of key strategic areas from the US dictate the requirement to respond to crises worldwide, not just in Europe, Southwest Asia, and Korea
- Uncertain availability of en route landing and overflight rights and the limited airfields and facilities in objective areas require an airlift and refueling capability specifically developed to minimize these constraints
- The requirement for early arrival of equipment and troops has increased as prepositioned equipment increased. To form a combat-ready unit, we must first be able to combine people and deploying resources rapidly with their prepositioned equipment
- The Army equipment modernization program has increased both gross tonnage and outsize proportions of unit equipment.

These factors combine to require a balanced, integrated approach to meeting these demands.

Airlift Master Plan

The Airlift Master Plan (AMP) provides the Air Force with a long-term document for effectively managing and employing the airlift assets we need to sustain our military strategy. It defines an airlift force structure that balances validated requirements, military utility, operational costs, manpower constraints, force stabilization, and force modernization to achieve the most beneficial results. In particular, the plan establishes an FY 98 force structure that meets the 66 million ton mile/day intertheater cargo airlift objective while concurrently increasing our intratheater capability. Our highest priority in airlift is the C-17, which provides the needed modernization and flexibility to meet both intertheater and intratheater requirements. Our FY 86 budget request builds towards the objectives documented in this master plan. The FY 85 delivered Air Force airlift capability is about 32 MTM/D. Figure 1 highlights projections for intertheater aircraft capability by year covered in the Airlift Master Plan.

INTERTHEATER AIRLIFT

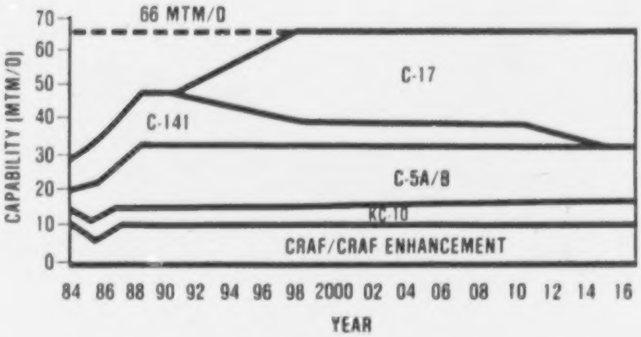


Figure 11

. The Airlift Total Force Plan (ATFP), published in September 1984, is the natural extension of the Airlift Master Plan. The ATFP allocates the recommended AMP force structure among active and Reserve forces to limit active duty manpower requirements, modernize the fleet, and provide a time-phased acquisition and transfer strategy. By FY 98, the Reserve forces will own and operate 44 C-5s, 80 C-141s, and 48 C-17s while providing over 50 percent of the intertheater airlift aircrews. The ATFP maximizes wartime capability during the transition period while providing sufficient peacetime capability.

C-5A. The C-5A is an air-refuelable, four-engine, long-range jet transport that carries 340 troops or 36 cargo pallets. The 70 operational C-5A aircraft are the only aircraft in our current inventory that can carry outsize equipment. They represent 30 percent of our existing wartime intertheater airlift capability.

The C-5A is undergoing a major wing modification that will extend aircraft service life by 30,000 hours, and allow this airlifter to operate well into the twenty-first century. The first modified aircraft was delivered in February 1983, ahead of schedule and under cost, with the entire fleet to be modified by July 1987. Twenty-eight had been delivered to MAC by the beginning of FY 85.

C-141B. The C-141B, backbone of our intertheater airlift, is an air-refuelable, four-engine, long-range jet transport with a maximum payload of 35 tons and a direct theater airdrop capability. The 234 operational C-141B aircraft represent 41 percent of US wartime intertheater airlift capability.

CRAF. The Civil Reserve Air Fleet (CRAF) is a voluntary civil and military partnership in which the airline industry commits selected resources to the Department of Defense in time of emergency. This partnership has existed since 1952. The CRAF Enhancement Program modifies widebody commercial passenger aircraft to provide airlift of bulk and oversize cargo during emergencies. The Air Force pays for the modifications and reimburses the airlines for the extra operating costs of flying these heavier aircraft. The program will total 20 aircraft—19 747s and one DC-10. We are requesting $164.2M in FY 86 for the remaining five modifications which will complete the CRAF Enhancement Program.

Intratheater Airlift

By far the most difficult mobility requirements to quantify are intratheater requirements—movement to final destinations of cargo and passengers arriving in major theater air terminals and seaports, shifts of prepositioned stocks, and tactical requirements growing from the battlefield situation. Historically, approximately 60 percent of all cargo arriving by air into a theater and approximately 10 percent of all cargo arriving by sea require onward movement. However, the additional intratheater requirement for inserting, repositioning, and resupplying combat forces is scenario-dependent. To size our intratheater airlift needs, the FY 85 Defense Authorization Bill directed a tactical mobility study similar to the Congressionally Mandated Mobility Study. DoD is conducting the Worldwide Intratheater Mobility Study (WIMS) to meet this requirement. It should provide the first definitive analysis of intratheater requirements when it is completed in January 1986.

C-130. The C-130 is a four-engine, turbo-prop assault transport that delivers troops or cargo in airdrop, extraction, or airland operations. Our primary intratheater airlifter, the C-130 carries oversize and bulk cargo over short distances. Of the 518 operational C-130s in the inventory, 302 are assigned to the Reserve and Air National Guard.

The Air Force is modifying 492 C-130B/E aircraft to correct outer wing fatigue and corrosion problems. This modification will extend aircraft service life well into the twenty-first century. As of the first quarter FY 85 we had 40 C-130s completed and returned to operational status. We are requesting $73.6M in FY 86 to complete procurement of the wing modification kits.

To depend less on ground navigation aids in wartime and improve low altitude navigation, our C-130s require an internal nonjammable navigation system. Our FY 86 request of $49.1M will continue procurement of a self-contained navigation system for 500 C-130s.

Other Airlift Programs

C-12F/C-21A. The purpose of the C-12F/C-21A program is to replace the existing CT-39 Operational Support Airlift (OSA) fleet without added cost. These CT-39s, acquired in the late 1950s and early 1960s, are fuel inefficient and need certain flight safety and structural inspections that would require aircraft modifications. To meet wartime support requirements and to provide a small, cost-effective aircraft to season pilots, we are replacing these aircraft. In September 1983, after a competitive acquisition, we contracted with Gates Learjet for lease of 80 C-21As (Lear 35s) and Beech Aircraft for lease of 40 C-12Fs (King Air 200s). We provide the pilots and fuel; the contractors provide the aircraft, full maintenance support, and initial pilot familiarization training. These contracts are for five years, with an option for an additional three years. We also have the flexibility to buy the aircraft at the five- or eight-year point. Because of favorable contracts and fewer Air Force maintenance people we were able to modernize our fleet and save Air Force funds—at the same time!

C-20A. The Air Force needs a highly reliable aircraft to provide transportation for the President, Vice-President, and other high ranking officials of the US and foreign governments. The C-20A (Gulfstream III) is replacing the C-140B, a 1950's aircraft that is inefficient compared to contemporary aircraft. The C-20A can carry 14 passengers and a crew of five with a range greater than 3,300 NM. The C-140B can carry 8 passengers over 1,600 NM. Eleven C-20As will replace 11 C-140Bs by FY 87 for the Special Air Mission (SAM) at Andrews AFB, Maryland, and the Operational Support Airlift (OSA) mission at Ramstein AB, Germany. The first three C-20A aircraft were delivered to us in FY 83 and 84 under a lease program and were purchased in FY 85. The FY 86 request of $168.8M is to purchase the remaining eight fully configured SAM aircraft.

Airlift Improvement Program

Our goal is to attain a fiscally constrained minimum of 66 MTM/D airlift capability as recommended in the Congressionally Mandated Mobility Study. Our plan will fund about 49 MTM/D by FY 90. Future airlift enhancements will be provided primarily by the C-17 acquisition.

C-17. The C-17 is the key element in our long-term program to reduce airlift shortfalls, especially in the area of outsize Army firepower and equipment. It gives us three vitally needed capabilities: it (1) completes and maintains the increase in intertheater airlift capability recommended by the Congressionally Mandated Mobility Study, (2) provides the theater commander with outsize intratheater capability, and (3) offsets the capability lost as older C-141s and C-130s begin leaving the inventory in the 1990s. The air-refuelable C-17 will be able to carry all classes of cargo over intercontinental distances and operate directly into small, C-130-type airfields typical of contingency areas around the world. This performance comes from integrating demonstrated and proven technology. It will be capable of all delivery modes: airland, airdrop (including outsize), low altitude parachute extraction (including outsize), and rapid combat offload. The Air Force request for $454M in FY 86 will continue full scale development leading to a production start in FY 88. The C-17 operational characteristics will enable it to perform in both inter- and intratheater roles. This flexibility coupled with life cycle cost advantages make it the right aircraft for the future. Our Airlift Master Plan shows savings of $16B and 15,000 manpower spaces over 30 years for the C-17 versus other alternatives that provide equivalent capability. Increased reliability, maintainability, and better operational utility are additional benefits provided by this versatile aircraft. Initial operational capability, with one squadron, will be in early FY 92.

C-5B. The completed C-5B program will increase the intertheater airlift capability of the Air Force by 7.5 million ton miles per day by February 1989. The program adds 50 C-5B aircraft to the C-5A aircraft currently in the inventory. The C-5B is an updated version of the C-5A using improved avionics and engines. C-5Bs fill our immediate need for added outsize cargo capability to airlift key firepower equipment of the Army and Marine Corps. We are requesting $2380.6M to purchase 16 aircraft in FY 86.

Aerial Refueling Overview

We need more aerial refueling capability to meet growing requirements for strategic bombers, tactical fighters, and airlift forces. To project air and ground forces rapidly around the globe, we must air-refuel tactical fighters and airlifters both in-theater and on deployment.

The present fighter force and strategic airlift force are entirely air refuelable. In addition, as B-52s are modified to carry Air-Launched Cruise Missiles, we need more refueling support to keep the bomber forces flexible and capable. Without tanker modernization, we will remain critically short of the needed aerial refueling capability for both strategic and general purpose missions. Two Air Force programs will help alleviate this shortfall: the KC-10 Extender Program and the KC-135R Modernization Program.

KC-10A. The KC-10A is a derivative of the commercial DC-10. Minimum changes have been made to provide the required military missions of transporting cargo, air refueling, or dual role. In a refueling role, the KC-10 can offload up to 127,000 pounds of fuel on a 3,000 NM radius flight. In the cargo role, it can carry 27 cargo pallets and the present fleet provides about eight percent of our wartime intertheater airlift capability. The KC-10 is virtually independent of en route basing and serves our tactical air forces as a long-range, non-stop deployment airlifter and tanker. Buying the KC-10 reduces both the airlift and tanker shortfall, since we presently employ it in a combined air refueling and cargo mission. We are purchasing this aircraft under a multiyear procurement contract at substantially lower prices than comparable commercial sales. We are requesting $519M for the procurement of 12 KC-10s in FY86.

KC-135. Our 615 operational KC-135 tankers, purchased in the 1960s, are aging. The KC-135R Modernization Program not only replaces the old J57 engine with the more powerful, fuel-efficient, and reliable CFM56 engine but updates or replaces over 25 systems and subsystems. These changes, combined with the ongoing wing modification, allow each KC-135R to do the job of one-and-one-half KC-135As and will extend service life well into the next century. The modification increases thrust 60 percent, decreases dependence on long runways, decreases fuel consumption 27 percent, and reduces maintenance costs. The Air Force plans to procure 389 modification kits for KC-135s through FY 90. FY 86 funds will procure 43 modification kits, bringing the total ordered to 145.

Special Operations and Combat Rescue

US Special Operations Forces (SOF) conduct or support security assistance, collective security, unconventional warfare, psychological operations (PSYOP), and counterterrorism missions. Although we may use all aerospace forces in special operations, the Air Force organizes, trains, and equips particular units to conduct special operations as their primary mission. We currently equip these units with MC-130, AC-130, EC-130, HH-53H, CH-3E, and UH-1 aircraft. We organize and use these forces in small groups to give the support and flexibility we need throughout the spectrum of conflict.

To align aviation functions better within the services, the May 1984 Memorandum of Agreement between the Chief of Staff of the Air Force and Chief of Staff of the Army would transfer responsibility for rotary wing SOF support to the Army. The Air Force will retain the long-range SOF rotary wing mission until a replacement aircraft for the HH-53 is introduced. This agreement allows each service to make the best use of its aviation assets while providing effective, affordable support to the SOF mission.

Combat rescue forces, equipped with HC-130, UH-60, HH-53, H-3, and H-1 aircraft, recover downed crewmembers from enemy territory during hostilities. These forces save lives, return valuable crewmembers, deny the enemy a source of intelligence and propaganda, and boost the morale of our crews in wartime. Selected combat rescue forces also augment our SOF.

MC-130. The MC-130H Combat Talon II is a night, adverse weather transport dedicated to the SOF mission. Used primarily for infiltration, exfiltration, and resupply of Special Forces and Navy Seals, the requirement for this aircraft continues to increase. We plan a total buy of 21 aircraft to augment our current limited force. The FY 86 budget request of $119.2M procures one MC-130H and modifies another C-130 to the Combat Talon II configuration. In addition, we continue to improve and upgrade AC-130H and MC-130E navigation and self-protection capabilities and develop peculiar support equipment that will be common to the MC-130H and the HH-60A.

Joint Service Advanced Vertical Lift Aircraft (JVX). The JVX program is a joint program to develop a common vehicle that will satisfy various mission requirements for all four services. The tilt rotor JVX will bridge the performance gap between helicopters and fixed-wing aircraft by coupling a vertical-takeoff and landing capability with medium speed flight (250 kts cruise) and range (700 NM). The Air Force needs this aircraft with its long-range, night, and adverse weather capabilities to conduct deep exfiltration Special Operations Forces (SOF) missions the current fleet of HH-53 and MC-130 aircraft cannot accomplish. Current plans call for an IOC (six aircraft) in

FY 94. The Navy is funding for all common airframe and engine development and Navy and Marine mission-unique development. Air Force funding is for SOF-unique requirements and operational test and evaluation.

The Navy, as executive agent, is close to completing the program's two-year preliminary design effort to reduce risks through wind tunnel and simulation testing, and is conducting trade studies and identifying costs and schedules for FSD. To date, testing indicates the JVX will meet or exceed our SOF requirements.

HH-60. The Combat Helicopter Modernization Program will let us rescue downed combat aircrews in current and future threat environments. Changes in the threat have made ineffective many of the successful techniques used in Southeast Asia combat rescue (2,700 combat saves). While we may still use the Vietnam-era Search and Rescue Task Force where the threat permits, most combat rescue missions will be clandestine, single-ship operations at very low altitudes using accurate navigation and terrain-masking to avoid detection. The current combat rescue helicopter fleet (primarily Southeast Asia-vintage) is aging, difficult to operate and maintain, and neither designed nor equipped for such operations. The HH-60A is a derivative of the Army UH60-A Black Hawk and is specifically designed for clandestine, single-ship missions. Modifications include extended range (including air refueling capability), more powerful engines and transmission (from the Navy SH-60B Seahawk), and improved avionics for low level precision navigation at night and under the weather. We are requesting $150M in FY 86 to continue development and begin production of three aircraft. By reducing procurement quantities from 155 to 90 and simplifying the avionics suite we have lowered total program cost from $3.0B to $1.2B and average program unit cost from $19.1M to $13.8M, reductions of 60 percent and 28 percent, respectively. Initial IOC is planned for FY 88.

THEATER FORCES

Although strategic deterrence is most critical, history has shown that adversaries are most likely to challenge our national interests at a lower intensity conflict. These conflicts can occur in any area of the globe and we can deter them only with effective and appropriate forces. Challenges may range from a high intensity Warsaw Pact offensive, to a small-scale insurgency in a Third World country, to peacetime requirements to counter the growing threat of terrorism. The forces required to meet this challenge must be a composite of many capabilities: fighter and reconnaissance aircraft, electronic combat forces, specialized command and control aircraft, and the conventional capability of our strategic bombers. We must maintain and equip these forces to fulfill the entire spectrum of defense missions.

Soviet Force Developments

The Soviets continue to expand and significantly modernize their numerically superior tactical air force. They are transforming their limited range, low payload, day fighter force into a potent, long-range, tactical air arm with increasing capability to operate in bad weather. Since 1980 the Soviets have produced an average of more than 1,100 new fighters a year and are beginning increased rate production of their next generation air-to-air and air-to-ground fighters. The new generation of Soviet fighters signifies their intention to equal or exceed the combat capability of US and allied tactical aircraft.

A significant development in Soviet military aviation is the reorganization of their command and control structure. The new structure incorporates air assets formerly assigned to the strategic, tactical air, and air defense elements which emphasize their theater approach to warfare. As a result, the Soviets have markedly increased their capability to mass their forces and conduct offensive air operations. Their tactical and theater air forces consist of over 6,000 fighters, interceptors, fighter-bombers, and medium bombers, including reconnaissance and electronic countermeasure variants. More than half of these aircraft have offensive combat missions.

Aircraft suitable for long-range interdiction include the Badger, Blinder, and Backfire bombers, as well as the Fencer attack aircraft. Flogger and Fitter fighter-bombers fly tactical ground attack missions. Direct troop support is the job of Frogfoot fighter-bombers and Hip and Hind helicopters. Flogger and Fishbed counterair fighters provide defensive cover and escort. Over the next ten years, we expect the Soviet tactical and theater air forces to receive more modern aircraft, and the ground attack force to continue to receive new Fencers and Frogfoot aircraft. We estimate that by the late 1980s Flanker and Fulcrum, the two newest counterair aircraft, should be in the inventory in significant numbers.

The Soviets have also modernized and expanded their ability to conduct theater offensive chemical and nuclear operations. They have deployed 387 mobile SS-20 intermediate-range ballistic missiles, more than two-thirds of which are aimed at

Western Europe, placing nearly all of NATO's forces at risk with little or no attack warning.

The mobility and firepower of Soviet ground forces have also improved greatly. A steady infusion of large numbers of new tanks, infantry fighting vehicles, self-propelled artillery, and attack helicopters enables them to conduct rapid offensive operations with massive firepower. To protect this force, the Soviets have also fielded sophisticated air defense artillery and an expanding family of surface-to-air missiles—all supported by a linked array of mobile and fixed radars. Further, the Soviet invasion of Afghanistan has allowed them to test the field operation of new equipment and the training of the people who use it.

The Tactical Challenge

The range of potential conflicts is broad. We, therefore, require forces whose capabilities are not limited to any particular scenario or to any one theater, but are planned based on the most intense scenario that will most closely fulfill the requirements of all theaters. Because of the size, density, and sophistication of the threat, Europe provides the most demanding scenario. However, the threat in the Pacific is growing and also presents a serious challenge. When possible, we incorporate theater-unique requirements into the design of new systems and capabilities to provide our forces as much employment flexibility as we can.

In the air-to-air role, our aircraft must detect, attack, and destroy numerically superior, sophisticated Soviet fighters and bombers. To accomplish this feat, we need autonomous search radars, efficient command and control (C^2), a mix of air-to-air missiles and guns, avionics that help us employ these weapons, and superior aircraft performance.

In the air-to-surface role, our aircraft must be capable of evading and suppressing enemy defenses. They should be able to deliver their munitions day or night, in all weather conditions, and whenever and wherever enemy forces are conducting offensive operations.

On any mission, our munitions are a critical part of weapon system capability. We need weapons that are effective—accurate and lethal with minimal aircraft vulnerability. In particular, precision-guided munitions substantially reduce the cost of destroying an opposing force, both in terms of sorties required and friendly losses. We need to provide the right force and capabilities to meet the theater threat while working to reach genuine reductions in theater forces and armaments.

Mutual and Balanced Force Reductions (MBFR)

MBFR talks between NATO and the Warsaw Pact have been under way in Vienna since 1973. The talks are concerned with reducing and limiting conventional forces in Europe and with associated confidence-building, stabilization, and verification measures. Round 32 ended on April 19, 1984 with a new Western draft proposal that included: (1) increased flexibility in the Western approach to data exchange; (2) increased verification measures; and (3) unconditionally committed the US and the Soviet Union to reduce to final national ceilings. Round 34 began on September 26, 1984, and beyond criticizing the West's proposal (from Round 32), the East has made no response during this round.

The FY 85 Defense Authorization Bill permanently limits European troop strength to the FY 85 President's Budget level. Further, a Senate Appropriations Committee report on the FY 84 Continuing Resolution Authority has a feature that would limit Air Force manpower in Europe to FY 84 levels. Continuing this freeze or unilaterally reducing troop strength would seriously undercut the US Alliance negotiating leverage. However, even though potential reductions in forces would help slow the rate of the Warsaw Pact buildup, the US must continue to modernize and modestly increase its theater forces to redress existing imbalances.

Tactical Fighter Roadmap

In any conflict, our tactical air forces must do two things: (1) quickly achieve air superiority so that our ground and air forces can fight and be reinforced free from enemy air attacks and (2) provide critical offensive air support to our ground forces. In the air-to-air role, our aircraft must be able to detect and destroy numerically superior, sophisticated Soviet aircraft; in the air-to-surface role, they must be able to evade and suppress enemy defenses and deliver ordnance in all weather conditions, day or night, against a wide variety of targets.

Achieving these ends requires a tactical force structure of sufficient size, composition, and capability, along with that of our allies, to meet adequately the threat it will face. The Air Force's Tactical Fighter Roadmap provides direction for building and maintaining such a force.

The Roadmap addresses force requirements in terms of both quantity and quality. It prescribes a procurement strategy that will increase the current force of 36 tactical fighter wing equivalents to 40 wings. Simultaneously it allows us to retire older, less capable aircraft, sustain the force at an acceptable average age, and modernize the strategic air defense forces. Further, it defines the quality improvements and the mix of capabilities we must field to achieve the flexibility and effectiveness required by all fighter missions.

The Air Force must procure from 260 to 280 fighter aircraft each year to grow to and sustain 40 tactical fighter wings, while maintaining an average age of ten years for our aircraft. The Roadmap calls for a progressive increase from the FY 85 procurement of 192 aircraft to reach the required level in FY 88. This year we are requesting funds to procure 228 fighters and continue development of the Advanced Tactical Fighter (ATF), vitally necessary to meet the air-to-air threat of the 1990s. We need these aircraft to get the proper force size and mix of specialized and multirole aircraft.

We will improve current inventory aircraft with modifications such as the F-4 low smoke engines and the AIM-9L/M self-protection capability for all tactical fighters. We will increase both flexibility and capability by acquiring advanced systems such as the Low Altitude Navigation and Targeting Infrared system for Night (LANTIRN). LANTIRN will open the night window for our F-15E, F-16, and A-10 aircraft and therefore deny a night sanctuary to potential adversaries.

Ongoing research and development programs such as the Short Takeoff and Landing/Maneuvering Technology Demonstrators (STOL/MTD), Advanced Fighter Technology Integration (AFTI), and the Engine Model Derivative Program (EMDP) are providing the critical technology foundation for the future fighter force. These programs will ensure the technologies are mature when we need them and give our fighter force the performance it needs to defeat the threat of the 1990s.

F-15. The F-15 is armed with both AIM-7 and AIM-9 missiles and the M-61 20mm cannon, and provides close-in visual and medium range all-weather kill capability. It has replaced the F-4E as the primary air superiority fighter in the tactical air forces. AMRAAM will improve future effectiveness of the F-15 in the air superiority role.

We have begun developing and producing avionics changes to maintain the F-15's air superiority and air defense capabilities through the 1990s. These avionics changes provide expanded capabilities in the air-to-air role through software features in the radar, adding AMRAAM, and incorporating improved communications and identification equipment. The avionics changes also include updates to the electronic warfare system to meet the current and projected threat. Our Multistaged Improvement Program (MSIP) calls for incorporating these improvements during production and retrofit of previously delivered aircraft.

To help meet the air threat and provide badly needed long-range surface attack capability we will begin procuring the F-15E Dual Role Fighter. The F-15E will retain its basic air superiority capability and include a mission-specialized rear cockpit, new avionics, LANTIRN, and additional air-to-surface weapons capability. In this configuration, the F-15E will perform air superiority and all-weather navigation, deep penetration, and night-adverse-weather attack with large air-to-surface weapons payloads. The FY 86 request for 48 F-15s includes the first eight F-15E aircraft. Future F-15 procurement will be "E" model aircraft. IOC for the F-15E is FY 89.

The F-15 continues to meet all mission requirements. During exercises the F-15 has consistently demonstrated it can generate the high sortie rates combat requires. For all FY 84 operations, the F-15 fleet had a fully mission-capable rate of 73 percent which exceeded the Tactical Air Command standard of 68 percent. The F-15 also has the best safety record of any air-to-air fighter in history. The proven reliability of the F-15 coupled with the planned improvements ensures the F-15 will retain its edge over the threat into the 1990s. We complement the unique capabilities of the F-15 with the multi-mission capabilities of the F-16.

F-16. The F-16 is a single engine, lightweight, high performance, multimission fighter capable of performing a broad spectrum of tactical air warfare tasks. We plan a total buy of 2,795 F-16s through FY 93 to continue modernizing our tactical fighter force. Our FY 86 budget requests $3,693.4M to buy 180 aircraft in the first year of a four-year multiyear procurement. This procurement is a follow-on to the original F-16 multiyear procurement that covered FY 82-85 and saved $257M.

The aircraft we will buy in FY 86 will be F-16C/Ds that include numerous improvements over the original F-16A/B. Despite its excellent performance, the F-16 currently has no radar missile and is limited in night attack capabilities. The F-16 C/D has a reconfigured cockpit, improved radar, greater computer memory and speed, increased electrical power, and increased cooling capacity. These improvements will let us incorporate and use advanced subsystems including AMRAAM, LANTIRN, ASPJ, the ALR-74 radar warning receiver, Global Positioning System (GPS) user equipment, the Enhanced JTIDS System (EJS), and interface with the Precision Location Strike System (PLSS). We also started development in FY 85 on an F-16 variant (referred to as the F-16F) and will continue in FY 86. This development will take advantage of demonstrated technology to continue the evolutionary improvement of the F-16. We will start full scale development of the F-16F in FY 87 leading to the first production in FY 89.

LANTIRN. The major deficiency in our tactical force today is the inability to conduct low altitude, night, and under-the-weather operations. The key to achieving this capability is acquiring the Low Altitude Navigation and Targeting Infrared system for Night (LANTIRN). LANTIRN will enable our tactical fighter forces (F-15E and select F-16 and A-10 aircraft) to penetrate enemy defenses at low altitude, and find and attack enemy targets at night and under the weather. Day visual meteorological conditions average only 4.5 hours a day during European winters. LANTIRN will expand the daily engagement window of our tactical fighters up to 14 hours during this period and reduce the Warsaw Pact sanctuary of night and bad weather.

The low altitude penetration possible with LANTIRN will greatly reduce our aircraft exposure to air defenses and therefore reduce our losses. LANTIRN improves the accuracy of weapons delivery at night and provides a weapons delivery standoff capability by automatically tracking and correlating the desired targets for the Maverick missile seeker. Additionally, LANTIRN's laser designator permits standoff delivery of laser-guided weapons.

In FY 86 we have requested $41M in research and development funds to continue developing support equipment and testing for the LANTIRN system, as well as $434M in production funds for navigation pods.

The targeting pod has had technical performance and reliability problems. Therefore, we restructured the LANTIRN program in August 1984, and now plan to continue testing the targeting pod for an additional year. Because the navigation pod alone will significantly improve our night capability, we plan to start producing this pod in FY 86.

The Air Force capped the LANTIRN program in 1983 at $2.31B (in FY 80 dollars). Within this cap, we are negotiating a fixed number of pod sets with the contractor.

More than 350 LANTIRN test sorties have been flown with the navigation pod, including over 6,000 miles flown at night at 200 feet or less. We completed initial operational testing of the navigation pod in December 1984, and will make the production decision in February 1985. We will continue to develop and test the targeting pod for an additional year with a production decision planned for FY 86.

Advanced Tactical Fighter (ATF). The demonstrated Soviet capability to develop large numbers of advanced fighters rapidly demands that we provide a fighter aircraft capable of meeting the threat of the 1990s and beyond. The ATF program will develop an air superiority fighter designed to carry the fight to the enemy, offset Soviet numerical superiority, and dominate air-to-air combat well into the twenty-first century. We have requested $242.9M in FY 86 to continue ATF development.

The newest Air Force air superiority fighter became operational in 1975 when the F-15 entered the inventory. The Advanced Tactical Fighter will be introduced in 1995, after a gap of almost 20 years—unprecedented in our history. The Soviets introduced two new air-to-air fighters in the early 1970s and will field three new fighters during the 1980s. We now need to start developing a new generation of Air Force fighters that take advantage of advances in technology to meet the evolving Soviet threat.

The FY 86 Advanced Tactical Fighter Program will continue to evolve the ATF design, develop and test the Joint Advanced Fighter Engine (JAFE), and develop critical ATF subsystems. We will maintain competition with three to four contractors in the demonstration/validation phase for ATF airframe and system concepts, and two contractors in the JAFE program. The demonstration/validation phase will reduce program risk and support a full scale development decision in FY 89.

Alternate Fighter Engines. The Alternate Fighter Engine Program (AFE) is a joint Air Force and Navy effort to encourage competition and build more durable engines for the F-14, F-16, and other aircraft. In FY 83 the Air Force, as lead service, contracted General Electric and Pratt and Whitney to begin full scale development of improved models of engines these companies were already building.

The General Electric F110 engine takes advantage of previous F101 (B-1) engine development with a new fan, low pressure turbine, afterburner, and exhaust nozzle components which are based on proven technology and hardware from both the F404 (F-18 engine) and the F101 programs. The Pratt and Whitney F100-PW-220 includes a Digital Electronic Engine Control, a new gear type fuel pump, and an Increased Life Core with over twice the durability of today's engine cores.

In supporting fair and full competition as directed by Congress, the Air Force competed the Pratt and Whitney F100 engine with the General Electric F110. The competition was based upon the durability, reliability, maintainability, and operability characteristics of the engines as demonstrated in tests and supported by contractor warranties.

We completed competitive source selection in February 1984 when we awarded one-year firm, fixed-price contracts to both companies. These FY 85 partial-year contracts provide for the acquisition of 41 Pratt and Whitney engines for new production F-15 aircraft, and 126 General Electric engines for new production F-16 aircraft. These engines will be installed in production aircraft beginning in 1986. Both contracts contain firm price options for subsequent years. The engine quantities in our FY 86 contract call for the purchase of 184 General Electric F110 engines and 159 Pratt and Whitney engines, a 54 percent-46 percent split. All the F110 engines and 45 of the F100 engines will be installed on F-16 aircraft. The remaining 114 F100 engines will be installed on F-15s. In our decision we considered readiness and supportability, industrial base for high performance fighter engines, congressionally approved programs, and the best balance of engines to satisfy Air Force requirements. We estimate that over a 20-year life cycle this competition will save between $3 and $4B.

Increased Performance Engines (IPE). In FY 85 we began a program to develop Increased Performance Engines (IPE) to provide higher thrust versions of the Pratt and

Whitney F100 and General Electric F110 engines for F-15 and F-16 aircraft by 1990. Initial engine development and demonstration will be completed under the Engine Model Derivative Program (EMDP). We will transition into full scale development under the Alternate Fighter Engine (AFE) Program.

The goal of the IPE Program is to produce higher thrust engines while maintaining at least the current AFE levels of durability, operability, reliability, maintainability, and life cycle cost. Both contractors will draw on their latest demonstrated component technologies to achieve higher thrust, including such improvements as more efficient compressors, higher temperature combustors and turbines, and state-of-the-art digital engine controls. We are requesting $118.4M within the EMDP and AFE program in FY 86 to continue IPE development.

Tactical Reconnaissance and Engagement Systems

Advances in Soviet tactics and the sheer size of the threat demand that we reduce the time from identifying a target to effectively attacking it. Tactical reconnaissance and engagement systems are a series of related programs that will provide a comprehensive picture of the battlefield and allow us to engage targets in near-real-time. These programs will allow us to locate fixed targets with the Advanced Synthetic Aperture Radar System (ASARS II), threat emitters with the Precision Location Strike System (PLSS), and moving targets with the Joint Surveillance and Target Attack Radar System (Joint STARS). All three will operate from aircraft standing off from the battle.

Each of these systems provides a capability the others cannot offer even in combination. Without Joint STARS, we would lose our real-time engagement system for moving targets. Without ASARS II, we would lose our high resolution fixed target imagery capability. Without PLSS, we would lose our best defense suppression engagement system.

The Joint Surveillance and Target Attack Radar System (Joint STARS) will be deployed on the C-18 aircraft and fills both Army and Air Force needs. Joint STARS provides an airborne radar that detects and tracks enemy forces, along with the ability to process information, control operations, and provide command and control interface. By identifying real time tactical moving targets, Joint STARS will help delay, disrupt, and destroy moving enemy ground forces from standoff ranges. This ability to attack enemy second echelon forces is vital to controlling their rate of entry into battle, and to preventing breakthroughs of allied positions.

TR-1 is the airborne platform for the Tactical Reconnaissance System (TRS) and PLSS. In the TRS configuration the TR-1 carries the ASARS II imaging radar and several other sensors. Information collected by these sensors is transmitted on a digital data link to a TR-1 ground station that processes and sends out reports in less than 15 minutes to users from Army group or Air Force level down to division and air operations center levels.

The concept is similar for TR-1 operations supporting PLSS. Three TR-1s carrying PLSS sensors form a triad that transmits threat radar information to a PLSS ground station. The PLSS ground station, if necessary, can direct a PLSS-equipped strike aircraft or guided weapon to attack the radar, or any other precisely known target. The TR-1 relays the strike guidance to the strike aircraft or weapon.

Stand-off reconnaissance alone will not meet all the needs of the theater commanders for accurate, up-to-date information. The Advanced Tactical Air Reconnaissance System (ATARS) will evaluate electro-optical sensors for use on manned and unmanned vehicles. These sensors will be evaluated using a tactical aircraft in the high speed, low altitude environment. Concepts associated with the sensors that will be addressed include data link, on board review, and exploitation aspects.

The Air Force sees the potential for drones in tactical reconnaissance as part of a complementary mix of manned and unmanned systems. The ATARS program includes advanced development on a tactical reconnaissance drone concept. We are working with the Navy to develop a cooperative effort in this area. The Air Force is not ready to start a full scale development effort because we still need to answer some questions about employing drones. For example, should they be recoverable or expendable, how should we integrate them into our existing force, and how and when do we train our people to operate them? And we need to answer these concerns before we proceed with development and production. We plan to resolve these questions and start a full scale drone development program in FY 88/89.

Electronic Combat

Essential for increasing the effectiveness of friendly air operations, electronic combat (EC) is action taken in support of military operations against the enemy's electromagnetic capabilities. The three elements of EC are: (1) electronic warfare (EW), (2) command, control, and communications counter-measures (C^3CM), and (3) suppression of enemy air defenses (SEAD). EC is a task-oriented support mission that applies to all mission areas using a force mix of self-protection, destructive, disruptive, and associated support assets. Our major programs in electronic combat include PLSS, Compass Call, EF-111A, F-4G Wild Weasel, High Speed Anti-Radiation Missile (HARM), and aircraft self-protection systems.

TR-1/PLSS/RECCE. FY 86 is the last year of our 27 TR-1 aircraft buy to support the Precision Location Strike System (PLSS) and reconnaissance missions. TR-1 aircraft will provide radar and electronic surveillance of the battlefield. PLSS satisfies an Air Force requirement for a location strike system. One hardened European ground station and one deployable ground station will support PLSS activities. Two hardened European ground stations will support reconnaissance tasking. FY 86 funding requests include: $263.6M to continue TR-1 and reconnaissance sensor procurement including five additional aircraft; $94.2M for a TR-1 hardened ground station; $112.8M for PLSS procurement; and $63.1M for PLSS RDT&E.

We are currently working with the Army on two initiatives that may have an effect on the TR-1/PLSS/RECCE program. One initiative addresses TR-1 force structure, PLSS, the number of PLSS/RECCE orbits, and associated ground stations. A second initiative addresses communications procedures for broadcasting PLSS target information to designated Army units in near-real-time.

Compass Call. Compass Call is employed in a standoff orbit to disrupt enemy communications systems. Our program procures kits and modifies 16 C-130 aircraft to the EC-130H configuration. Modification funding in FY 86 totals $29.6M.

EF-111A. We will modify the last F-111A to the EF-111A configuration with completion in FY 86. This will give us 42 aircraft to provide standoff jamming against enemy early warning, acquisition, and ground-controlled intercept radars. However, rapid advances in Soviet air defenses and electronic countermeasures require updates to the EF-111 system. We are requesting $37.2M in FY 86 to fund Tactical Jamming System updates.

F-4G Wild Weasel. The F-4G program modifies 18 additional F-4E aircraft to the F-4G configuration. The F-4G, equipped with the High Speed Anti-Radiation Missile (HARM), is our key near-term destructive EC system. The ongoing two-phase Performance Upgrade Program (PUP) updates the mission avionics (APR-38) to provide increased capability against advanced threats. The FY 86 funding request includes $36.7M for RDT&E.

High Speed Anti-Radiation Missile (HARM). The AGM-88 HARM provides an advanced munitions capability for the F-4G. Our FY 86 funding request for missile procurement is $478.1M for 1,715 missiles.

Aircraft Self-Protection. As the Soviets continue to field new defensive systems and upgrade existing systems we must improve our self-protection capabilities. Radar warning receivers (RWR), self-protection jamming systems, and expendables (chaff and flares), provide tactical, strategic, and special operations aircraft with critical threat warning, and the ability to disrupt those threats. Self-protection systems are essential for survivability but must be continually updated to counter threats of increasing density and sophistication. Development and procurement continues for the Airborne Self-Protection Jammer (ASPJ), ALQ-131 Block II Electronic Countermeasures (ECM) pod, and ALQ-184 ECM pod. ASPJ will provide advanced internal countermeasures for the F-16. The ALQ-131 Block II and ALQ-184 ECM pods will provide updated countermeasures for TAF fighters. We continue to modify the ECM systems on the B-52G and B-52H aircraft. These modifications (called ALQ-172 on the B-52H) improve the existing ALQ-117 system to provide better countermeasures against the threat. Development and procurement of new or improved Radar Warning Receivers (RWRs) such as the ALR-62I and ALR-74, as well as the F-15 Tactical Electronic Warfare System (TEWS) continues. We are requesting $608.4M in FY 86 for procurement of aircraft electronic self-protection systems. To complement the capability of HARM and to augment F-4G Wild Weasel, EF-111, and Compass Call force effectiveness, we are initiating development of a self-protection weapon or SPW. The comparatively lightweignt, low cost SPW missile is being designed to counter low-altitude, radar-directed threats and for employment by all tactical aircraft without sacrificing air-to-surface munitions load capabilty. We are also requesting $16.3M for development of the Integrated EW System (INEWS) for the ATF.

Munitions

The US may never match Soviet forces in quantity. Even with allied help the Soviets and their allies retain a numerical advantage. To make each sortie as effective as possible, we must have modern, effective munitions. Much of our existing munitions inventory consists of older, less capable munitions. We have made progress on improving our munitions stockpiles; however, we need to continue to improve the quality and quantity of our munitions.

A complementary mix of direct delivery and standoff weapons lets us attack a variety of fixed and moving targets and allows us to adjust to enemy actions.

Standoff systems offer surgical accuracy while reducing exposure to enemy defenses. Direct attack weapons allow us to mass firepower where we need it. A proper mix of these weapons gives us a more effective and survivable force.

Air-to-Air. Quality air-to-air weapons in sufficient numbers are essential if our fighter aircraft are to defeat the enemy in the air and achieve air superiority. Our present air-to-air missiles are the AIM-7 and AIM-9. For the future, the AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM) and the Advanced Short Range Air-to-Air Missile (ASRAAM) will provide our fighters with added flexibility in engaging and destroying the enemy within and beyond visual range.

In FY 86 we are requesting $82.3M to procure 425 AIM-7M missiles to fill shortfalls in the radar missile inventory. AMRAAM will bolster our air-to-air capability with its increased velocity, launch and maneuver employment, and capacity for multiple target attack. Analyses show that AMRAAM will greatly increase our effectiveness against a numerically superior threat and reduce the vulnerability of our crews. Initially, the AMRAAM will fill our critical shortfall of medium range missiles. Later, as AMRAAMs continue coming into the inventory, we will begin phasing out the AIM-7s. A recent Secretary of Defense decision emphasizes efforts to reduce AMRAAM production costs. Results of these efforts will be applied to AMRAAM production plans.

We are requesting $43.3M in FY 86 to procure 800 AIM-9L/Ms. The Sidewinder will continue to be a vital element of our short range air-to-air capability in the 1990s and will continue in the inventory through the year 2000. ASRAAM (being developed by the United Kingdom and Federal Republic of Germany) is planned to be a follow on missile to the AIM-9 in the 1990s. A procurement decision will be made after we completely review missile cost, schedule, performance, reliability, and maintainability.

Air-to-Surface. The wide diversity of military threats the US faces requires a mix of quality air-to-surface munitions to achieve our objectives in airfield attack, antiarmor, defense suppression, and interdiction. These munitions let the theater commander employ his aircraft at night and in adverse weather conditions, use standoff tactics early in a conflict when critical targets must be struck in the face of heavy defenses, and then transition to direct attack tactics as the enemy's defenses draw down. Our FY 86 request builds toward our goal of procuring and positioning enough of the right weapons to fight until resupply networks and industry can mobilize.

However, many of our current weapons are from the Vietnam era. We need a conventional weapons mix that will do the job with the most kills per dollar. Specifically we are developing and buying:

- Standoff weapons with the range, accuracy, and payload/warhead(s) suitable for lethal attack of a variety of targets with reduced exposure of the launch platform to ground-based defenses
- Improved defense suppression weapons to neutralize the growing surface-to-air threat
- Multiple kill weapons against the follow-on forces and massed units and

- Weapons to destroy enemy assets in hardened structures.

To destroy armored ground forces, we are increasing our weapons inventory of Maverick missiles, 30mm gun pods and 30mm ammunition, Combined Effects Munitions (CEM), and Gator mines. We are also developing more effective antiarmor weapons. The Sensor Fused Weapon with its guided antiarmor submunitions will continue full-scale development. We are requesting $1,262.9M in FY 86 to provide increased antiarmor capability.

We are making progress in improving our capability to effectively attack enemy airfields. Durandal, a French-built, rocket-assisted, runway cratering munition, is a first step. Besides procuring Durandal, we are developing a new generation of weapons and submunitions to attack all elements of the airfield target system and we are studying airfield attack methods. We are requesting $0.7M in FY 86 to begin integration of the Boosted Kinetic Energy Penetrator (BKEP) into the development of the Direct Airfield Attack Combined Munition (DAACM). We will also integrate the BKEP into the AGM-130 for a precision guided standoff attack capability.

Airfields have many other targets which, if destroyed, could reduce enemy sorties. The first generation of precision-guided munitions greatly improved our ability to attack targets on airfields and throughout the enemy's rear area. In FY 86 we will increase our inventory of newer, better precision weapons with the GBU-15 and the Low Level Laser Guided Bomb (LLLGB). The powered GBU-15 (designated AGM-130), currently in development, will also provide greater standoff range. We are requesting $350.2M in FY 86 to procure the GBU-15 and the LLLGB, and to develop the AGM-130.

Chemical Warfare

The Soviets have the most comprehensive chemical warfare (CW) capability in the world and have used chemical weapons in Afghanistan, where their enemies have no defenses or means to retaliate. Today the Soviets have several times more chemical munitions than the US and their chemical industry can produce CW agents at manufacturing rates sufficient to meet military needs. The US has no such capability.

Chemical Warfare Defense (CWD). The objective of the CWD program is to ensure our forces can survive and operate in a CW environment. CWD procurement funding requested in FY 86 is $153.3M for new aircrew and ground crew individual protective equipment, advanced detection and warning systems, survivable collective protection systems (SCPS), and CWD protective cells for NATO-funded facilities in Europe.

Although CWD equipment is essential, our current equipment—while protecting our people—also reduces operational effectiveness. Heat buildup, loss of visual acuity, and reduced dexterity caused by wearing hot, cumbersome, obstructive protective equipment degrade individual performance. Other key limitations are: shortages in collective protection (CP) systems for rest and relief, detection and warning devices capable of responding to all threat agents, adequate decontamination material, and the ability to treat chemical casualties. We have started a vigorous RDT&E program to correct these deficiencies.

An initial production decision was made in August 1984 for the SCPS with funds to procure 35 SCPS. The final increment of 250 lightweight decontamination systems will be procured in FY 85, giving the Air Force a total of 1,806 systems. Operational test and evaluation (OT&E) and initial production are scheduled for the automatic liquid agent detector (ALAD) and the surface contamination monitor (SCM) in FY 85 and FY 86, respectively. We plan OT&E for follow-on aircrew eye/respiratory protective equipment for FY 86. The FY 86 request of $187.1M is a significant milestone in correcting the serious qualitative and quantitative deficiencies in our present chemical protection capability.

USAF Chemical Retaliatory Capabilities. We try to deter using chemical weapons during wartime by ensuring we can effectively retaliate. However, our current chemical retaliatory capability is limited. National policy decisions since 1969 have prohibited us from improving, modernizing, or expanding chemical munition stockpiles.

The Air Force has two chemical munitions in the inventory, the MC-1 bomb, developed during the 1950s and the TMU-28/B spray tank, developed during the 1960s. The USAF stockpile is inefficient and widely dispersed, and the airlift sorties required to deploy our chemical munitions to a combat theater would further exacerbate existing airlift shortfalls. Most seriously, we are unable to effectively deliver persistent agent to targets protectd by modern air defenses.

Since the President certified to the Congress that production of binary weapons was essential to the national interest, we have continued development of the Bigeye binary spray bomb and plan to produce the first bombs in FY 88 with FY 86 funds. These dispensers will let us place persistent agent over a wide area in a retaliatory attack. We are requesting $22.1M for Bigeye procurement in FY 86. More seriously, we are unable to effectively deliver persistent agent to targets protected by modern air defenses.

Tactical Command, Control, and Communications (C^3)

As in the strategic area, C^3 is vital for successful tactical operations. We rely heavily on C^3 to coordinate and mass forces. The 1973 Middle East war and Air Force and NATO exercises show that jam-resistant air-to-air and air-to-surface UHF and VHF voice communications are essential for effective command and control. To support this requirement, we are requesting $108M for research and development of Enhanced JTIDS (EJS), and $51.0M for development and procurement of improved HAVE QUICK (jam-resistant UHF) and SINCGARS-V (jam-resistant VHF).

Data communications are essential for distributing detailed information throughout the battlefield. The Joint Tactical Information Distribution System (JTIDS) will provide jam-resistant, secure communications using a digital data link. We are requesting $150.0M in FY 86 to continue development and testing.

The ground-based tactical air control system (TACS) deployed in the late 60s and early 70s faces several major problems. Lack of survivability, limited mobility, and saturated computers are problems we must resolve. The main improvement will be for modular control equipment (MCE) for the many control segments and for the hardware baseline for the Ground Attack Control Center (GACC).

The Air Force joined the existing Marine Corps TAOC-85 program in 1982 which provided significant funding, schedule, and interoperability benefits. The GACC is a software modification effort to the MCE that will help the TACS control the air attack of time-sensitive mobile ground targets. GACC is a part of the larger OSD joint interdiction program. We will use the $103.3M requested in FY 86 to continue the MCE Preplanned Product Improvement Program (P^3I), continue the GACC development, and procure the first four MCE operation modules.

Tactical C^3 Survivability. The survivability of our tactical C^3 equipment depends on being able to disperse the equipment and to minimize radar signature patterns. In both cases, our tactical C^3 equipment is deficient. Radio and radar remoting is currently limited, increasing the Anti-Radiation Missile (ARM) threat to the operations centers. We cannot currently disperse elements of the operations centers, and radars are vulnerable to an ARM threat from the energy radiated in side and backlobes. Air Force tactical C^3 programs seek to correct these deficiencies.

The Ultra-Low Sidelobe Antenna (ULSA) program will produce a slotted waveguide antenna that reduces the amount of side and backlobe radar energy on which an ARM could guide. ARM alarm sensors will provide warning when missiles approach the radar. The ARM decoy program provides decoys we will deploy several hundred meters from the radar to lure the incoming ARMs away from the radar. We are requesting $42.0M in FY 86 to continue the development of these survivability features. Additionally, Modular Control Equipment (MCE), will let us disperse C^3 operations centers.

Combat Identification Systems

The numerical superiority of the projected threat demands that we be able to engage the enemy at long ranges with our beyond-visual-range weapons. The Combat Identification Program is designed to provide advanced development and engineering development of technologies for reliable long-range identification of non-cooperative airborne targets in all weather and hostile electromagnetic countermeasure environments. We will use the $22M requested in FY 86 to continue developing identification techniques in three broad areas: cooperative identification (e.g., the Mark XV NATO IFF System), non-cooperative identification (methods that don't require a response from the target aircraft), and ground or indirect identification.

Congress has cited as an issue the lack of agreement on the operating frequency for the Mark XV in NATO. In fact, Germany is the only country that doesn't agree on the frequency, and they are presently conducting a frequency interference study whose results should be available in the spring of 1985. But, even in the accelerated program, full-scale development is not scheduled to start until mid-FY 88. The US has told Germany at the Ministerial level that we cannot afford the German position since it would require us to retrofit all Identification Friend or Foe (IFF) antennas on all our platforms. Further delay in the program could indicate to the Germans that we are not committed to the program and might be persuaded to change our minds on the operating frequency.

On the indirect identification project, we developed the identification processor and sensor over the last year, and plan to demonstrate it at Eglin AFB, Florida, and in Germany in FY 85. This project to automate the identification function at ground sites will then deploy in the late 1980s or early 1990s.

For the noncooperative identification projects, laboratory efforts include successfully simulating a radar warning receiver/fire control computer interface software (RFIS) system. We have started a one-year preliminary design assessment leading to a production decision in early FY 86. Other projects continue. The program for FY 86 is to continue developing these programs and transfer them to the appropriate program office for full scale development or production.

Ground-Launched Cruise Missile (GLCM)

To reverse a declining deterrent posture, the NATO Ministers unanimously agreed in December 1979 to pursue a dual-track decision—engaging the Soviet Union in arms control negotiations while deploying 464 GLCMs and 108 Pershing IIs in Europe. Both the GLCM and Pershing II achieved initial operational capability in December 1983. GLCM provides an accurate, survivable deep-strike capability that improves the theater commander's flexibility by allowing us to use dual-capable fighter aircraft conventionally for a longer period before committing them to nuclear roles at high states of readiness. As a result of its mobility, low altitude flight profile, and small radar cross section, the GLCM is survivable while compounding the enemy's targeting and defense problems.

The deployment of the GLCM in Europe is on schedule. They are operational at Greenham Common, United Kingdom, and Comiso on the island of Sicily, Italy. Activating GLCM bases in the Federal Republic of Germany and Belgium is also proceeding as we planned. In FY 86, we request $553.9M to continue procuring missiles and launcher systems.

SPACE

Space offers significant opportunities to expand and improve traditional mission areas efficiently and effectively. Today, following a quarter-century of experience, both the United States and the Soviet Union depend on space-based systems for warning, communications, and command and control of forces worldwide. Emerging technologies suggest space systems will increase support to strategic and theater forces, improving their effectiveness and thus deterring an adversary from using force.

Our FY 86 program builds on the evolutionary development of space systems in the national security program. We must make full use of the opportunities to support the entire spectrum of national security missions when space assets represent the most efficient and effective means to do so. Consequently, to identify future options and prevent technical surprise, we are also engaged in an active research and development program in space-related technologies.

Soviet Space Activities

By all measures, the Soviet level of effort devoted to space in the 1980s is increasing significantly over the previous decade. The Soviets routinely conduct four to five times as many space launches per year as the United States. (Military systems account for more than 70 percent of Soviet space launches, with at least another 20 percent having combined civil-military missions.) Current operational space systems can perform reconnaissance, ICBM launch detection, naval surveillance and targeting, and other missions that contribute to their military capabilities. The Soviets also have a deployed antisatellite weapon system that can attack satellites in low-to-medium earth orbit.

In recent years, the Soviet's annual 15 percent space budget growth rate has exceeded their overall military budget growth rate. This makes the space program one of the fastest expanding components in their defense effort and reflects the growing importance of space systems to Soviet military planning. Based upon Soviet history, published statements and military doctrine, as well as Soviet actions in space, they clearly intend to attain and maintain military superiority in space.

By the late 1980s, the Soviets will have a heavy-lift booster that can launch payloads five times larger than the maximum US capability. By the mid-1990s, they will probably have gone beyond the current Salyut space station program to a larger, permanently manned space station that will likely be used primarily for military purposes. They will continue their aggressive particle beam and laser weapon development programs with potential for a space-based laser (with antisatellite mission capability) in the next five to ten years.

Space Doctrine

The basic philosophy of our space doctrine is to use space to support our national security objectives and ensure free military and civilian access to space for peaceful purposes. If conflict occurs, we must be prepared to use the necessary force. Our basic military objectives in space, then, are:

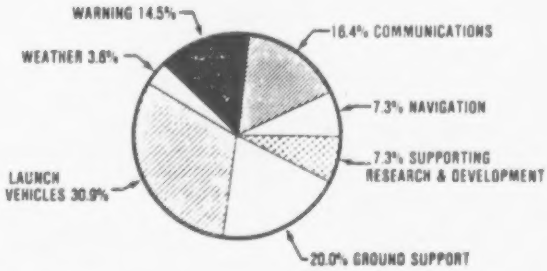
- Maintain freedom of operations in space
- Increase effectiveness, readiness, and survivability of military forces
- Protect the nation's resources from threats in, through, and from space
- Prevent space from being used as a sanctuary for aggression.

US Space Roles

Space-based systems can perform or support virtually all Air Force missions. These systems provide vital communications links, weather and arms control verification information, surveillance and warning, and navigation support. Space defense has become an important factor in our strategic planning with the continuing development of a US antisatellite capability and our important role in the nation's Strategic Defense Initiative (see Strategic Forces Chapter). Consistent with the National Space Policy we are developing space systems to perform those missions that we can better or more efficiently perform from space.

SPACE BUDGET - FY86
SHARES BY MISSION AREA

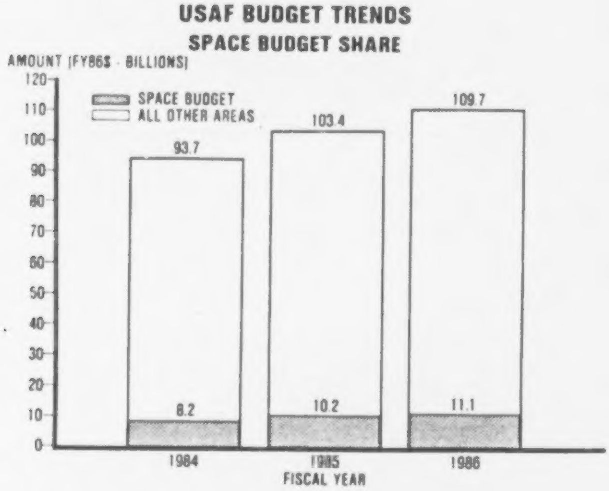
Figure 12



*DOES NOT INCLUDE GENERAL SUPPORT

The proposed FY 86 Air Force budget request for space activities is approximately $11.1B, or about 10.1 percent of our total request. This total is an aggregate, comprising all the specific budget items in the various mission categories of our space program (Figure 12). The growth of this component of our budget is within the overall 5 percent growth of the Air Force budget (Figure 13) and results without curtailing other missions.

Figure 13


USAF BUDGET TRENDS
SPACE BUDGET SHARE

We are working several ways to assure access to space, particularly noting the growing Soviet capability. Specific areas of interest include: improving surveillance, navigation, and communications capabilities of space systems; increasing the flexibility and sustainability of our space system networks; deploying satellites with multiple missions and longer operational life; and, making space systems less vulnerable to attack.

Space-Based Systems

We continue to have a technological edge over the Soviets in our space systems, including those devoted to communications, navigation, and meteorology.

Communications Satellites. Our primary program, the Air Force Satellite Communications (AFSATCOM) System, comprises communications packages on several satellites and terminals on aircraft and ships and in ground sites. The system reached full operational capability in June 1984. In 1983 we began full-scale development of the next generation of communications satellites, Milstar, to provide improved, more survivable, and jam-resistant communications in the extremely high frequency (EHF) range. The program is proceeding well.

The Defense Satellite Communication System (DSCS) is an evolutionary system deployed to provide secure voice and high speed data-transmission for worldwide command and control, crisis management, intelligence information, and Presidential and diplomatic traffic. Now in its third phase (DSCS III), the program benefits from acquisition initiatives; the multiyear procurement of seven Phase III satellites, beginning in 1985, will save $139.8M compared to annual procurements.

Navigation. The Navstar Global Positioning System (GPS) is a space-based radio navigation system providing joint service users with worldwide, all-weather, three-dimensional position, velocity, and precision-time information. Navstar Space and Control Segment production contracts are on schedule and within budget. By the end of 1987 we expect to provide two-dimensional capability worldwide to military and civil users, with three-dimensional capability in 1988.

Meteorology. The Defense Meteorological Satellite Program (DMSP) is the DoD's most important single source of global weather information. The multiyear procurement of spacecraft and primary sensors is proceeding on track, with savings of about $58.2M over an annual buy.

Organization for Space

Achieving our national security objectives in space will depend in large part on our organizational structure. We must be prepared to respond rapidly and appropriately to opportunities and challenges in space.

Air Force Space Command. Since September 1982, Air Force Space Command (SPACECMD) has evolved into an important element linking the operational users of military space assets and the research and development teams that design, build, and launch spacecraft. Focal point for space policy and doctrine development, and advocate for space programs, SPACECMD is addressing the many challenges and opportunities of space. The command is responsible for four bases, various sensor sites, and operational satellite systems.

SPACECMD has assumed operational responsibility for the Defense Support Program (DSP), the Defense Meteorological Satellite Program (DMSP), the future Navstar GPS, and the future Milstar communications system. Under an agreement between SPACECMD and Air Force Systems Command (AFSC) signed in 1984, SPACECMD will assume operational responsibilities for specific portions of the Air Force Satellite Control Network (AFSCN). The transfer will be complete by October 1987. This evolution continues the increasing role of SPACECMD as the operational advocate for space activities, while maintaining the traditional division of roles and responsibilities between operator and developer. AFSC will continue to perform space systems research and development and manage and direct assets associated with that responsibility.

Consolidated Space Operations Center (CSOC). Among SPACECMD's major functional responsibilities will be the Consolidated Space Operations Center. CSOC will include two elements: a Satellite Operations Complex (SOC) and a Shuttle Operations and Planning Complex (SOPC). The SOC will share the satellite control workload with the Satellite Test Center (STC) while the SOPC will provide facilities for secure flight planning, readiness, and flight operations for military space shuttle missions. Besides augmenting present control capacities, CSOC will strengthen our space posture by eliminating single-point vulnerabilities at the STC (for satellite control) and Johnson Space Center (for Space Shuttle missions).

We plan to activate the CSOC on a schedule consistent with our projected need for facilities and communications for the Global Positioning System (GPS) Master Control Station. Construction at the CSOC site (Falcon AFS, near Colorado Springs) is progressing satisfactorily. Pending completion of the SOPC, we will continue to conduct DoD shuttle missions from the facility at NASA's Johnson Space Center.

Unified Space Command. In November, the President approved a change in the nation's unified and specified command structure to provide for a new unified command, US Space Command (USSPACECOM). We wholeheartedly support this decision as the next step in making national space assets more efficient and responsive to national security objectives. We will continue to work with the Joint Planning Staff for Space (JPSS) to define further the roles and missions of the command and develop a transition plan for activating USSPACECOM as soon as possible.

Other Space Initiatives

Space System Growth. The Navstar GPS navigation system and Milstar communications satellite system are examples of developing, near-term programs that reflect our commitment to the greatest capability in our space assets. We will continue to ensure space systems are as capable as current technology permits, provide survivability in all elements of space systems, and assure access to space for critical national security systems efficiently and effectively.

System Survivability. Because the military now depends on space systems, designers and operators have been required to consider survivability and endurance as space system characteristics. Currently, selected operational space systems employ radiation-resistant technologies, on-orbit sparing techniques, anti-jam communications, attack detection sensors, and distributed or mobile ground control stations to increase survivability. Future versions of current satellites as well as new systems will employ these and other survivability features such as: laser hardening, distributed satellite constellations (with communications cross-links), improved attack warning sensors, autonomous switching of redundant on-board equipment, and satellite attack avoidance maneuvering capability. We are developing and evaluating technology for new techniques such as shoot-back self-protection as well as against potential future threats. An achievable and affordable survivability strategy is essential to a successful overall space strategy.

Space Transportation System (STS). The Air Force continues to work closely with the National Aeronautics and Space Administration (NASA) in developing the nation's Space Transportation System as a means of routine access to space for commercial, private, government (including DoD), and foreign users. The Space Shuttle is operational at Kennedy Space Center, and has made 14 successful missions through 1984 (and our first dedicated DoD mission in January 1985). Our FY 86 budget includes approximately $1.25B for projects associated with operations and development of the STS.

The Inertial Upper Stage (IUS) is an Air Force contribution to the STS, designed to lift large payloads (up to 5,000 pounds) to orbits beyond the capability of the Space Shuttle. The first use on the Shuttle (April 1983) failed to place NASA's Tracking and Data Relay System Satellite into its proper orbit. After we made corrective design changes, the IUS performed successfully during the dedicated DoD mission in January.

Further, we are working closely with NASA to develop the common Centaur G upper stage to lift even larger payloads (up to 10,000 pounds) to geostationary orbits or beyond.

We are proceeding to build the West Coast launch site at Vandenberg AFB. We expect to achieve initial operational capability for October 1985, with the first launch now scheduled for January 1986. The flight verification vehicle (Shuttle orbiter 101) arrived at Vandenberg in late 1984 to begin checkout procedures before the actual flight orbiter arrives later this year. We investigated reports of possible safety problems at the site and found no significant problems. We are totally committed to safety, and will never sacrifice the safety of our operations to the demands of schedules.

The Space Shuttle system will continue to be the prime means of launching DoD payloads into space well into the future. All upper stage programs (including the IUS, Centaur G, and the Payload Assist Module-Delta Class II, or PAM-D II, which supports the Navstar GPS) are proceeding well.

Expendable Launch Vehicles. The President, in National Security Decision Directive 144 (NSDD 144), established a National Space Strategy directing DoD to acquire a limited number of expendable launch vehicles (ELVs) to complement the Space Shuttle. We are implementing the President's policies this year to continue to develop and start buying ten complementary ELVs in FY 86 for first launch in 1988. We plan to use ELVs on two flights per year; this schedule will have little impact on the Shuttle program. Our FY 86 request also begins a program to convert 12 Titan IIs from ICBMs to space launch vehicles to support launches from Vandenberg AFB beginning in 1990. The Titan II Space Launch Vehicle will give small DoD satellite programs, including the Defense Meteorological Satellite Program, a highly reliable, cost-effective access to space.

Finally, whether with expendable vehicles or other technologies, the Air Force must continue to pursue options for future military space launch requirements. The Advanced Military Spaceflight Technology (AMST) program will pursue the technologies needed to provide flexible, responsive, and survivable access to space into the next century.

The Space Challenge

The continuing growth of national security dependence on space systems for efficient, effective support, coupled with the recent organizational changes emphasizing the conflict management role of space systems, suggests increasing demands on the Air Force. The military use of space is not new; rather, it has evolved over the years as we have identified missions as being best or most efficiently performed from space. Our initiatives and programs for this and the next few years continue that evolution without dramatic changes in space missions or fundamental capabilities. In the next decade, however, we can expect dramatic changes in hardware (e.g., new boosters) and the opening of new opportunities in space. We must prepare now for both the near and more distant future. Our FY 86 program will achieve that goal.

INSTALLATIONS

The condition of our facilities directly affects combat capability. Runways, taxiways, aircraft shelters, missile silos, launch control centers, and maintenance hangers and shops must be as ready to function during hostilities as our people and the systems they operate. Facilities supporting our people, such as medical facilities, troop housing, dining halls, and community/recreational facilities, provide for basic needs, contribute to the morale and welfare, and help us retain quality people.

A highlight of the FY 86 request is funding to continue US support of the NATO Ministers' decision to deploy GLCM. We are requesting $50.3M for 680 military housing units in Belgium and Germany. Accompanied tours will provide stability and continuity while establishing an experienced personnel base. For troop and mission support, we need $43.8M to provide essential operational facilities at Molesworth, United Kingdom, and Woensdrecht, The Netherlands. Funding these programs is essential to the readiness and capability of GLCM and to support our NATO Allies in redressing the unilateral Soviet advantage gained by their deployment of SS-20 missiles.

Funds for installations and maintenance are included in the operation and maintenance (O&M) appropriations. Our O&M funding shortages in the mid-to-late 1970s resulted in a deteriorated physical plant and large backlogs in equipment and facility maintenance. Despite some increased funding and congressional actions to improve this negative trend, the condition of our installations has only marginally improved, and facilities maintenance and repair backlog continues to grow.

In the continuing effort to make Air Force bases better places for our people to live and work, we participate in the DoD Model Installation Program. The Model Installation Program tests innovative methods of improving how we manage base operating support services. Our model bases will keep savings generated since the program began in January 1984 to upgrade their own facilities and services.

Military Family Housing (MFH)

Today's Air Force mission demands we use sophisticated technology. Our people are a major investment in training, experience, and time. For example, a fighter pilot represents over $1M in training-related investments and two years of effort. Jeopardizing these investments by placing these well-trained members in inadequate or substandard housing creates discontent and threatens our ability to keep them. We must recognize, and react to, the major effect living conditions have on retention, productivity, and readiness of our peacetime forces.

The MFH appropriation supports the fundamental needs of all Air Force families by providing housing services. These services include: housing referral and assistance, operating and maintaining over 140,000 Air Force owned or controlled family housing units, upgrading or replacing existing units that are not energy efficient and lack modern amenities, and acquiring new units through either construction or lease. All of the operating and lease funding and a portion of the maintenance funding are for must-pay activities—management, utilities, refuse collection, fixed rent, recurring maintenance, emergency repair, and furnishings.

Since the average age of our housing units is 28 years, funds to improve and repair them is essential to keep units from deteriorating to substandard levels and to preserve a capital investment of over $11B. Overseas, the housing problem is most severe. We currently have a 26,900-unit housing deficit at 29 overseas locations. Our families often must live in inadequate, substandard, and unsanitary conditions. At some locations, the only housing available is over an hour away, over narrow, dangerous roads, where winter weather is a major problem. In other areas, families don't have potable water or adequate sanitary systems, streets are poor, and homes, automobiles, and possessions are insecure. The photographs at Figure 17 clearly illustrate existing unsuitable living conditions, as well as the dramatic quality of life improvement MFH funds can provide. To support our people properly and assure our Air Force families' morale stays high, we must upgrade existing units with amenities and energy efficiency measures, and we need to continue building and leasing new units to trim the existing housing deficit and adjust to new mission needs.

Our FY 86 request of $929M (a $45M increase over FY 85) funds $334M for operations, $332M for maintenance, $48M for leasing, $5M for advance planning and design, $61M for improvements, and $1M for debt payments. This funding adequately covers our must-pay activities and substantially reduces our housing maintenance and improvements backlog. Our request also includes $148M to build 1,880 new housing units. Of the 1,880 units we are building, 1,830 of these units are overseas to support new missions (GLCM and TR-1) and help ease the housing shortfall.

Real Property Maintenance Activity (RPMA)

The Real Property Maintenance Activity program operates and maintains our base structure of 3,000 installations throughout the world. RPMA resources are primarily devoted to the must-pay activities required to keep our bases open. About 85 percent of the RPMA budget goes to utilities, crash rescue and fire protection, snow removal, rents, leases, custodial services and routine maintenance and repairs. We use the remaining funds for contracted facility projects to preserve and extend the useful life of our physical plant.

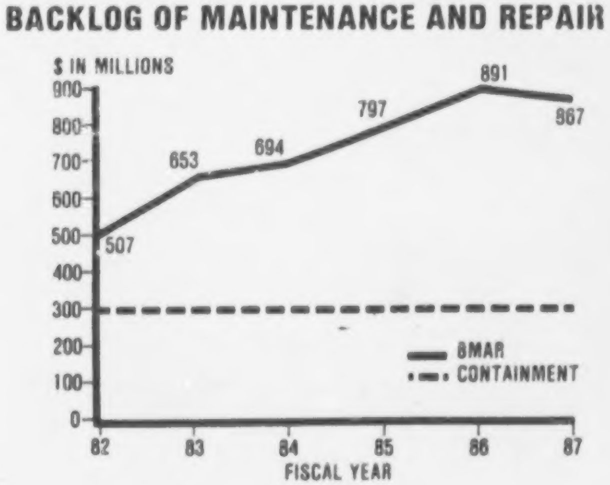


Figure 14

We have a significant backlog of maintenance and repair (BMAR) projects. Past year funding left us significantly above the congressionally directed $300M containment level for BMAR, and we anticipate a BMAR increase in FY 86 of $94M. This growth level will put us almost $600M above the required containment level. Annual, general reductions in our O&M funding requests prevent us from reducing the BMAR deficit. As a result, our facilities continue to deteriorate causing problems both operationally and in terms of support for our people.

When feasible, we try to reduce the number of our bases whenever we can delete or consolidate missions. Since 1960 we have decreased our bases 46 per cent (from 253 to 136 major installations). We anticipate no major changes except for those facilities we need to accommodate the GLCM beddown in Europe, the new Consolidated Space Operations Center, and USCENTCOM support.

We must continue modernizing our facilities to bring them up to a level consistent with our mission needs and the needs of our people. Today, the average age of our facilities is 28 years. Despite previous efforts, many facilities, especially in overseas areas, remain substandard. The replacement value of the Air Force physical plant is over $115B in constant FY 83 dollars—an investment we can't afford to let erode. We need about $2B per year for replacement and upgrading to renew the plant every 50 years.

Military Construction Program (MCP)

The MCP funds support new and increased missions and readiness as well as quality of life improvements. Our active forces MCP request is broken down into categories shown in Table A, below.

TABLE A

MILITARY CONSTRUCTION PROGRAM (MCP) FUNDING
($Millions)

	Appropriations		Request
	FY 84	FY 85	FY 86
Systems Acquisition	519	542	693
Readiness	224	60	120
Quality of Life	350	334	330
Upgrading the Workplace	499	582	773
Planning and Design	156	165	166
General Cost Reduction	(-197)	(-110)	-
Total	1,551	1,573	2,082

The systems acquisition category contains major investments in support of Peacekeeper, Command, Control, and Communications, Air-Launched Cruise Missile, Ground-Launched Cruise Missile, and B-1B. The readiness category includes facilities for USCENTCOM support in Southwest Asia, USSOUTHCOM in Central America, and operational facilities in Europe and the Pacific, such as chemical warfare protection, munitions storage, and fuel storage. The next two categories, quality of life and upgrading the workplace, include the facilities where our people live, work, and play, such as dormitories, maintenance shops, and gymnasiums.

Many of our existing facilities are obsolete. In past years, we have not had enough funds for quality of life and workplace upgrading after we had satisfied higher priority readiness, sustainability, and systems acquisition projects. Therefore, we now have a significant backlog of these upgrade projects. Increased funding reflected in FY 84, FY 85, and FY 86 supports our goal of reducing this backlog to a more manageable level.

NATO Infrastructure Program

The NATO Common Infrastructure Program is funded by member nations who contribute an agreed percentage to a six-year cost share period termed a Slice Group. This program was established to share the burden of funding infrastructure programs meeting NATO requirements. Some support projects, such as troop billeting and quality of life and workplace, were deemed national responsibilities. Also, individual nations fund unique national requirements, such as command and control. In FY 86 we are requesting $297M for support facilities in Europe (excluding housing): for TR-1 and GLCM beddown; unaccompanied enlisted housing at Zweibrucken AB, Germany; a vehicle maintenance center at Bentwaters, United Kingdom, a medical facility for Chicksands, United Kingdom; and six chemical warfare defense protective cells. These projects contribute to troop welfare and morale, and directly improve our combat capability, but are not eligible for NATO common funds.

The US share in the previous Slice Group 31-35 was 27.4 percent, yet historically, we have received a larger percentage of the funded projects. While NATO infrastructure funding can meet many of our wartime requirements, we will still have to fund programs vital to our wartime capability.

The previous Slice Group 31-35 did not have enough money to fund US NATO eligible projects such as minimum essential facilities for collocated operating bases (COBs) and semi-hardened aircraft shelters. Air Force efforts to speed up the construction of these vital combat readiness facilities led the US to prefinance several projects. As yet, we have not recouped all US prefinancing expenditures.

TABLE B

US PREFINANCING EXPENDITURES
(as of November 1984) ($M)

	TOTAL	RECOUPED	BALANCE
DoD	626.0	354.4	271.6
AF	420.7	205.7	215.0

Displeasure with the recoupment rate led Congress to postpone new prefinancing until we recoup more and require one dollar in recoupment for prefinanced NATO projects for every four dollars we contribute to further infrastructure programs.

Recent deliberations have led member nations to increase NATO infrastructure funding substantially ($7.1B) for the next Slice Group (36-41). We anticipate progress in addressing the large prefinancing recoupment backlog in FY 86.

APPENDIX

Figures and Tables (Cont'd)

USAF
CLASS A/MAJOR MISHAP RATES
1950-1984

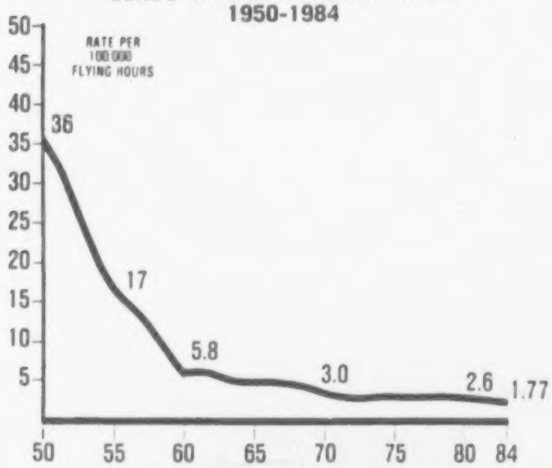


Figure 15

AIRCRAFT INVENTORY
PROJECTED AVERAGE AGE

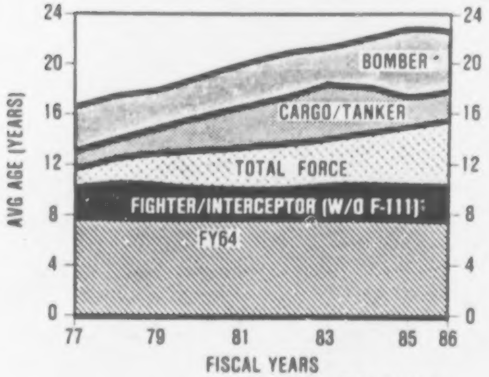
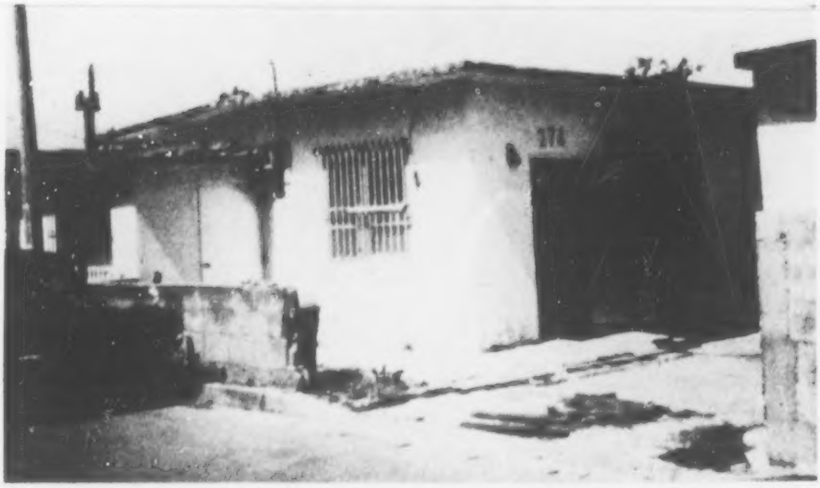


Figure 16

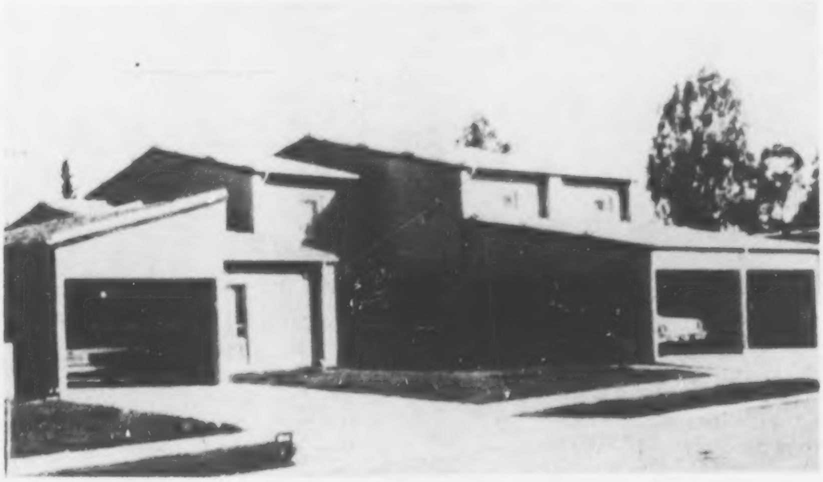
	FY86	FY85-86 CHG
BOMBER	23.0	0.0
CARGO/TRANS	17.9	+0.4
TOTAL FORCE	15.9	+0.5
FTR/INT	10.7	-0.1

OFF-BASE JUNIOR ENLISTED RENTAL
KADENA AB. JAPAN



21-YEAR-OLD STRUCTURE, 682 SQ FT. RENT - $365.00 PER MO., INCL UTILITIES

ON-BASE ENLISTED TRIPLEX HOUSING
INCIRLIK AB, TURKEY



HOUSING COMPARISON
Figure 17

TABLE C

SUMMARY OF APPROPRIATIONS (TOA)
(Then Year $ Millions)

APPROPRIATION	FY 1984	FY 1985	FY 1986
Aircraft Procurement	21,318	26,078	26,165
Missile Procurement	7,799	8,388**	10,863
Other Procurement	6,958	8,848	9,538
RDT&E	12,275	13,506	15,579
MILCON			
AF	1,551	1,573	2,082
AFR	41	68	67
ANG	109	111	137
O&M			
AF	17,773	19,213	20,924
AFR	783	881	908
ANG	1,801	1,829	1,830
MILPERS			
AF	12,825	18,143	19,188
AFR	388	583	623
ANG	578	892	995
Stock Fund	1,289	549	465
Family Housing	804	884	929
TOTAL TOA*	86,285	101,548	110,293

* Numbers may not add due to rounding

**Includes $1.5 billion for Peacekeeper pending March '85 vote

TABLE D

PERSONNEL END STRENGTHS
(In Thousands)

	FY 1984	FY 1985	FY 1986
Active duty Military	594.5	602.1	611.5 (+9.4)
Civilian			
Direct Hire	239.8	242.8	252.5 (+9.7)
Indirect Hire	13.0	13.7	14.3 (+ .7)
Selected Reserve			
AFR	70.3	74.8	77.4 (+2.6)
ANG	104.1	107.7	110.9 (+2.6)

TABLE E

PERSONNEL COSTS
(Millions of $)

	FY 1984	FY 1985	FY 1986
Active Duty Military	12,842	18,117	18,794
Civilian*	6,702	7,017	7,456
Selected Reserve			
AFR**	388	583	623
ANG	582	892	995
AF Total	20,514	26,620***	27,694

* Includes Active, Guard, and Reserve

** ROTC and Health Professions Scholarship Programs are included

*** Includes pay raise for FY 85

TABLE F

SELECTED KEY PROGRAMS
(Millions of $)

AIRCRAFT (3010)(3600)	RDT&E	PROC*	(QTY)	TOTAL
B-1B	367	5,462	(48)	5,829
C-17	454	0	(0)	454
C-5B	0	2,268	(16)	2,268
C-20A	0	169	(8)	169
MC-130H	14	80	(1)	129
F-15	252	2,139	(48)	2,391
F-16	95	3,390	(180)	3,485
HH-60A	14	122	(3)	136
KC-10A	0	447	(12)	447
T-46A	54	206	(33)	260
TR-1/U-2	0	344	(8)	344
MISSILES (3020)(3600)				
Peacekeeper	804	3,037	(48)	3,841
GLCM	0	554	(95)	554
Sparrow (AIM-7M)	0	82	(425)	82
Sidewinder (AIM-9L/M)	0	43	(800)	43
Maverick	0	489	(3500)	489
HARM	4	478	(1715)	482
SPACE SYSTEMS (3020)(3600)				
DSCS	7	149	(2)	156
Navstar/GPS	77	197	(9)	274
Milstar	478	34	(1)	512

* Does not include weapon system initial spares

TABLE G

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
TOA

BUDGET ACTIVITY ($B)	FY 1985*	FY 1986*	% Real Growth
Tech Base	.7	.8	+ 5%
Advanced Tech Dev	.5	.7	+33%
Strategic	5.8	5.7	- 5%
Tactical	2.7	3.8	+33%
Intel/Comm	1.8	2.4	+24%
Def Wide Msn Supt	2.0	2.1	+ 7%
	13.5	15.6	+11%

Strategic ($M)	FY 1985	FY 1986
B-1B	465	367
ICBM Modernization	2341	1581
Adv Strat Msl System	98	174
Adv Air-to-Surface Msl System	24	79
Milstar	448	478
NORAD Cheyenne Mtn Complex	61	130

Tactical ($M)	FY 1985	FY 1986
F-15	190	252
ATF	94	243
Advance Comm	89	124
C-17	123	454
JTIDS	87	92
AMRAAM	210	101
Joint STARS	47	260

*May not add due to rounding

TABLE H

AIRCRAFT PROCUREMENT BY BUDGET ACTIVITY
(Then Year $ Millions)

	FY 1985		FY 1986	
Budget Activity	Qty	Amount	Qty	Amount
Combat Aircraft	236	$12,710	289	$11,640
Airlift Aircraft	33	1,932	24	2,437
Training Aircraft	10	126	33	206
Other Aircraft	7	220	11	540
Modifications		3,075		2,918
Spares & Repair Parts		5,326		4,935
Spt Equip & Facilities		2,689		3,490
TOTAL		$26,078		$26,166

TABLE I

AIRCRAFT PROCUREMENT BY WEAPON SYSTEM
(Then Year $ Millions)

	FY 1985 & Prior		FY 1986		Total Planned Buy (thru FY 1990)	
Weapon System	Qty	Amount	Qty	Amount	Qty	Amount
B-1B*	52	$18,123	48	$5,462	100	$23,585
F-15	834	15,584	48	2,139	1,110	27,516
F-16	1,139	15,220	180	3,390	2,147	35,913
KC-10	40	3,072	12	447	60	3,643
C-5B	13	3,666	16	2,268	50	8,146
HH-60	-	6	3	116	90	1,006
TR-1/U-2	27	836	8	344	37	1,322
MC-130H	5	224	1	80	20	1,094
T-46	10	132	33	206	574	2,774
C-20A	3	52	8	169	11	221

* Does not include B-1 costs prior to FY 1980.

TABLE J

MISSILE PROCUREMENT BY BUDGET ACTIVITY
(Then Year $ Millions)

	FY 1985		FY 1986	
Budget Activity	Qty	Amount	Qty	Amount
Ballistic Missiles	21	$2,352**	48	$ 3,124
Other Missiles	4,741	1,612	6,922	2,896
Modifications		162		134
Spares & Repair Parts		512		539
Other Support		3,750		4,169
TOTAL*		$8,388		$10,863

* Totals may not agree due to rounding.
**Includes $1.5 billion for Peacekeeper pending March 85 vote.

TABLE K

MISSILE PROCUREMENT BY WEAPON SYSTEM
(Then Year $ Millions)

	FY 1985 & Prior		FY 1986		FY 1987-90	
Weapon System	Qty	Amount	Qty	Amount	Qty	Amount
Peacekeeper	42	$4,432	48	$3,037	133	$6,716
ALCM	1,763	2,657	-	34	-	31
GLCM	389	2,103	95	554	76	242
AIM-7	4,944	976	425	82	265	67
AIM-9	5,700	430	800	43	785	64
AGM-65	6,000	1,134	3,500	489	39,900	3,378
HARM	1,459	661	1,715	478	6,023	1,469
AGM-130	-	-	97	49	2,472	924

TABLE L

OTHER PROCUREMENT BY BUDGET ACTIVITY
(Then Year $ Millions)

Budget Activity	FY 1985	FY 1986
Munitions & Associated Equip	$1,252	$1,622
Vehicular Equip	337	341
Electronic & Telecomm Equip	2,298	2,817
Other Base Maint & Spt Equip	4,961	4,758
TOTAL *	$8,848	$ 9,538

*Totals may not agree due to rounding.

TABLE M

OTHER PROCUREMENT MISCELLANEOUS
(Then Year $ Millions)

Program	FY 1985	FY 1986
Munitions & Assoc Eq		
30MM (All Types)	$204	$131
Low Level Laser Bomb Guidance (LLLGB Kit)	60	104
GBU-15	127	128
CBU-87 (Combined Effects Munition)	282	553
CBU-89 (TMD/GATOR)	135	202
BSU-49/50 Infl Retarder	67	45
FMU-112/FMU-139 Fuze	43	62
BIGEYE	0	24
Chaff	14	18
Durandal	48	95
Vehicular Equip		
High Mobility Vehicle	18	15
2 1/2 Ton Cargo Truck	18	16
P-19 Fire Truck	21	24
R-9 Fuel Truck	6	24
Electronics & Telecommunications Equip		
Over-the-Horizon Backscatter Radar	137	237
TR-1 Ground Stations	40	75
Automatic Data Processing Equipment	156	171
Range Improvements	92	105
Base Level Data Automation (Phase IV)	83	65
Joint Tactical Comm Program	103	162
Spares	348	398
Tactical Air Control System Improvements	0	95
Defense Support Program	58	118
BMEWS Modernization	0	71
Satellite Control Facility	22	66
Other Base Maintenance & Spt Equip		
Chemical Biological Defense Program	38	81
Medical/Dental Equipment	44	132
Mobile Electric Generators	19	30
Defense Dissemination Sys	2	21
Air Base Survivability	12	37
Mobility Equipment	44	43

TABLE N

SELECTED ACQUISITION REPORTS

Within 15 Percent Parameter

1. Adv Comm Sys/Enhanced JTIDS
2. AGM-65D (IR Maverick)
3. AGM-88A (HARM)
4. AIM-7M (Sparrow)
5. ALCM
6. Space Defense Systems (ASAT)
7. B-1B
8. B-52 OAS/CMI
9. C-5B
10. C-17A
11. Def Meteorol Satellite Prog (DMSP)
12. DSCS III
13. Defense Support Program (DSP)
14. F-15 (will incl DRF funds starting 31 Dec 84)
15. F-16
16. GLCM
17. JTIDS
18. KC-10A
19. KC-135 Reengine
20. LANTIRN
21. Navstar GPS
22. PLSS
23. T-46A
24. TRI-TAC
25. WWMCCS Information System (WIS)
26. Inter-Service/Agency Auto Msg Proc Exchange (I-S/A AMPE)
27. Advanced Tactical Fighter
28. Combat IFF System (CIS)
29. Joint Surveill and Target Attack Radar Sys (Joint STARS) vice Pace Mover
30. Microwave Landing Systems (MLS)
31. Sensor Fused Weapon (SFW)
32. AMRAAM
33. Peacekeeper
34. IUS

Above 15 Percent Parameter

1. CONUS OTH-B Radar
2. Low Level Laser Bomb Guide Kit (LLLGB)

Chairman GOLDWATER. Thank you very much, Mr. Secretary. General Gabriel.

STATEMENT OF GEN. CHARLES A. GABRIEL, CHIEF OF STAFF, U.S. AIR FORCE

General GABRIEL. Thank you, Mr. Chairman.

We do appreciate, as the Secretary said, what you have done to help us build the Air Force we have today which is second to none. It is the best we have ever had and is the best in the world. That takes a strong commitment and a lot of money. We will need your support to continue to keep it the best.

I would like to talk about what we have done with the money and to use some examples. We can continue later if you choose.

COMBAT CAPABILITY

There has been, unfortunately, a misunderstanding and some confusion about what combat capability is and what is the measure of change from one year to the next; how do you track the trend of how well you are doing?

The "C" status, the combat rating, is not the vehicle to do that. We found that out last year in our testimony to you. The "C" status does not cover unit size. It does not cover the quality of the force and modernization. It covers only a little bit of sustainability. It tells us how good the commander is, how well he is doing with what he has, but not all the other things I mentioned.

It doesn't cover modernization, force structure, or as much as you need to cover in sustainability to tell how good you are in one year compared to the next. I would like to give you a couple of examples.

The F-106s at Jacksonville are going to be transitioning soon into F-16s. The F-106s have been C-1 for years and doing well. But the F-106, equipped with the AIM-4 missile is not the F-16. A C-3 F-16 outfit has a lot more combat capability than a C-1—F-106 unit. So, C-status does not give you the feel for improvements in combat capability over time. They tell you how well a unit can do against the threat the day the rating is taken. We are not knocking C-status because we need it, but it is not a good measure of improvements in combat capability over time.

If you took the 1979 C-rating criteria and plotted our 1984 assets against them, the units would all be in the green, everything except for two tactical fighter squadrons which would be C-2.

It would not do any good if we had a measuring stick that always told us everything was green when we knew there were things we had to pay attention to. So, we had to look harder and toughen up the criteria in order to identify those things that need attention.

We owe you, the Congress and the public a better measure of combat capability from one year to the next. You can't just start with readiness, one portion of it, and say that is the measure. That is not it. Readiness is a very important part, but it is not the whole picture.

SPARES AND AMMUNITION

We have had a fivefold increase in what we are paying for parts, spares and ammunition. That has really begun to pay off. I will show you how.

The fighter crews, tactical crews, are getting 22 percent more flying than they got 4 years ago. We are up now to a little over 19 hours a month. That investment has translated into 76 percent more combat sorties available. That is a lot, 76 percent more sorties, with parts, spares and munitions. Those 76 percent more sorties are also better sorties.

When Curtis LeMay asked me, "If we had a war in Europe, would you run out of airplanes, parts or ammunition first?" I told him obviously you run out of airplanes first. If you are in a situation where you run out of spares, parts and munitions first, you have a very expensive static display.

So, it is very cost effective to support what you have. O&M is very important to readiness.

One further example—the last gunnery meet that we had at Nellis, the first time the F-16s were in it, the top gun averaged 5 feet from the middle of the target with his bombs. At the meet before that, a Guard A-7 outfit won. The A-7 pilot hit an average of 29 feet from the center of the target. That is pretty good for both airplanes. But it is a big difference.

The F-16s are getting accuracies we used to expect only with smart bombs, in some cases better, depending on the proficiency of the crews.

Today we have almost 1,200 new fighters that we bought during the last 5 years. That means we now have in the total force, and everything I say includes the total force, not just the active, but Guard and Reserve—almost half our fighters are F-15s, F-16s and A-10s.

Before, we had only one-fourth of the force made up of those fighters. So, the new equipment is much better, much more reliable, much safer.

FLYING SAFETY RECORD

As you know, last year we had the best flying safety record in the Air Force's history. I should say the year before, 1983 we had the safest. Last year we had the next to the safest, which was very close. In the fighter business it was an amazing record, 3.6 accidents per 100,000 flying hours. It is unheard of in the fighter business to be that good.

The F-15 which had a 2.0 rate, is the safest fighter ever built and the F-16 is the safest single engine fighter ever built.

We are on track this year with our safety record given what has been accomplished to date. So, it looks like industry has already taken into account the reliability and maintainability that we are talking about.

The Secretary and I made R&M the fourth leg on our acquisition stool. Cost, scheduling, and performance are very important things. You need all those parameters. But, if you can't support the equipment, you can't use it. Reliability and maintainability give combat capability. They are very, very important.

Just to mention a few other things besides the fighters. We have 65 percent more airlift capability today than we had 4 years ago in C-141s and C-5s. That goes to the end of this year. There was an infusion of parts and spares, especially in the C-5 business, to get that increase. We discovered that problem 5 years ago.

You know, it takes a couple of years before you get the results of the funding in parts and spares. Then we stretched the C-141. That gave us almost one-third increase in capacity right there. That is a large increase in our ability to take the Army or Marines to the fight and get them there on time.

MISSILES

We have added during that period of time over 1,000 air-launched cruise missiles. Of course, we also brought in the ground-launched cruise missiles. There are a number of things we brought in like the KC-10s. All of this has given us today what I think is a pretty good return on your money for that 5-year period.

Obviously, we have to try to do better. Looking down the road, what I fervently hope is that we are going to be able to keep up this trend, keep up the momentum. I have two concerns, two big concerns.

One is the MX and the other is offensive chemical weapons. I don't need to say much about the MX. I do think it is the single most important vote that you are going to have here rather shortly.

MX

We have had a strong triad for the last 25 years and it has been successful. We have deterred; that is the objective. That is the name of the game; let us not have a war. I think this is most important. ICBM's are important to the Soviets because they have about 75 percent of their warheads in the ground in silos. We only have 25 percent.

They put their focus on the land-based ICBMs. There is a perception of power about them. If the Soviets outnumber us, say, three to one in ICBM warheads, as they do now, and we fail to modernize—as you know, in the seventies we didn't do very much and they built two new missiles—I think that would have an impact on their behavior, especially if they feel a great advantage in the one area they believe most important in the strategic balance.

I think the MX vote is a very important one. I urge you to pass that so we can get on with the MX program.

The Soviets know how good this missile is. We have had seven test shots, all highly successful, to date. The results have far exceeded what we expected. We had the seventh test last Friday and it was beautiful. You can lay one right in Kennedy Stadium if you want to look at it that way, the accuracy is that fantastic.

They know that. I think that is a key factor that brought them back to the table. Even more so than SDI.

CHEMICAL WEAPONS

The other concern is chemical weapons. The only deterrent you can have to chemical warfare is a credible offensive capability. We have a limited defensive capability. You know that. You have seen the people working in the protective suits out there.

Wearing the suits is a terrible degradation in what you can do to turn an airplane or fly an airplane. You might get one turn, possibly two, and that is all because the people get tired quickly. That is a limited capability.

The other side does not have the same concerns, even though they have defensive equipment. They know our Army and our Air Force are very limited in what we can do in chemical offense because we have not modernized. We have unsafe equipment and not very effective weapons.

So, we do need that binary weapon badly.

JOINTNESS

Finally, on jointness, I would like to say that I think the system we have with the JCS is working well. It has worked especially well among the Chiefs.

I think you all know about the agreement that General Wickham and I have made. We have 31 initiatives we are pressing. We have already completed nine of them. We are very serious about getting on with the rest of them.

We have some good examples in these initiatives. They are intended to give us the most effective combined combat capability we can afford. This agreement has cut out duplication and looked to see where the voids are now and in the future.

I have seven Air Force people on General Wickham's staff, while he has seven on my staff. They are spread out in electronic warfare, doctrine and other staff agencies to see if we can get closer together on how we build our budget and put together our programs.

The Marines were involved in this process all the way through. There was a Marine observer.

The Navy has come onboard in four of these initiatives, and I expect them to join us in six or seven more. Such things as IFF, close air support, munitions, and RDT&E, are examples of things that we do together.

These initiatives have been a good thing and we have saved money already. We have cut out some dumb things we were doing like an electronic warfare system we were building in the Air Force to jam attacking aircraft as they came across the FEBA. We were going to put some vans all along the front and put our jammers in those vans.

The Army was going to do the same thing, but for a little different purpose. We were using the same contractor in the same building with a little partition between the two groups working for each service. I cut our program out, canceled it, and we put a black box in the Army vans. Now we have the same coverage we were going to get before at a much reduced cost.

We did the same thing on an airborne jammer. We could give the Army enough station time to put a jammer onboard one of our systems and they canceled their program.

JSTARS is a Joint Surveillance and Target Acquisition Radar System. There was to have been a series of Army radars in small airplanes and larger radars in Air Force aircraft. We now have one airborne platform and one radar. I think it will do the job better and we have programmed a few more of them. We will also have the ability to operate in theaters other than Europe. That is a real advantage.

So, this whole joint process has been, I think, very rewarding and we are going to continue it.

We have that same group working to add initiatives to the initial 31 we began with. The Navy, as I say, is coming onboard as much as they can.

AIR FORCE PERSONNEL

Finally, Mr. Chairman, I would like to say a word about our people. I appreciate your remarks. I find the same thing when I go to the field, which I don't do as much as I would like, but I also have my Chief Master Sergeant who goes around. He tells me the same thing.

Young people enter the Air Force today because they want to be in the Air Force. They are enthusiastic, they have good equipment, good training, good tactics and good technology. They feel confident. The crews are getting more flying time now. They are busy. They know they can do their job.

I think that is important to anybody in our business because we are dedicated to our purpose. If we know we can do a good job, that makes a big difference.

I really appreciate the support all of you have given us to bring us to this point today.

One thing I will say, though. Even the two and three stripers have mentioned their worries about retirement to me in the places I have gone and as the Secretary said, the master sergeants have mentioned it to him.

In fact, my Chief Master Sergeant of the Air Force brought it up yesterday, Mr. Secretary, that some of the senior master sergeants have told him they are getting to the point where they believe getting out is good because they think things are going to change.

That is part of our problem for not explaining it well enough to them. I don't think anything like that is happening, but the uncertainty and the talk about retirement are unsettling.

AIR FORCE RETIREMENT SYSTEM

If I can make one plea on the retirement system, the troops have seen pay and compensation change. It changes every year. Everything else has changed except the 20- and 30-year retirement program. Those two phase points: 20 years with 50 percent of base pay, and 30 years with 75 percent of base pay should not change.

As long as you keep the program constant, that is the one thing people can hang their hats on. I think the troops would settle down if you don't talk about changing that part of it.

It is a pleasure to be with you this morning.

Chairman **Goldwater**. Thank you very much, General.

I will ask Senator Thurmond if he has any comments or questions.

Senator **Thurmond**. Mr. Secretary and General Gabriel, we certainly welcome you to the Hill. We appreciate the good work you are doing. Any way we can cooperate we will be very pleased to do so.

There is nothing more important to this country than a strong military establishment. I think the people generally appreciate what our Defense Department is trying to do.

AVERAGE AGE OF TACTICAL FIGHTERS

There have been improvements in the Air Force in recent years and there are still some, of course, that need to be done. It is my understanding that despite our recent outlays, the average age of our tactical fighters is increasing.

Is that true?

General **Gabriel**. It is about 10 years. If we get well over 200 fighters a year in aircraft procurement, we can bring that average down. We need about 260 or more to hold the age, and increase the force structure.

What is happening is that we have been holding at 35 to 36 tactical fighter wings and not increasing to the 40 wings that we have planned. But the average age now is at 10 or 10½.

Senator **Thurmond**. Mr. Secretary, are the aircraft procurement rates meeting the attrition rates?

Secretary **Orr**. They are meeting attrition rates. We probably lose about 50 aircraft total a year, not only tactical fighters, but all types. They are meeting attrition rates, but they are not quite keeping up with the age factor which is roughly a tenth of a year for each year older. In other words, if it starts at 10.2, then it will go to 10.3, then 10.4. We are keeping up with attrition, but not quite holding the average age

Senator **Thurmond**. Some figures shown to me indicate we bought more tactical fighters during the Carter administration than we have bought during the Reagan administration. Is that correct?

Secretary **Orr**. I don't have those figures, but I would not doubt it because the Air Force emphasized during the Carter years the procurement of weapons without the necessary parts to keep them flying.

Starting with Mr. Carter's last budget which we inherited as we came in, they had made substantial changes in that final budget. We enlarged even that.

We have emphasized the spare parts and munitions. The platforms themselves are not particularly valuable if they are down for lack of spare parts or have no munitions.

[The information follows:]

Aircraft Procurement

During the Carter administration we procured 1,323 tactical fighters (fiscal year 1977 through fiscal year 1980). During the first term of the Reagan administration we procured 809 tactical fighters. By the end of the current fiscal year, we will have procured a total of 1,001 tactical fighters (fiscal year 1981 through fiscal year 1985). By model/design/series, aircraft procurement breaks down as follows:

	Fiscal year—		
	1977-80	1981-84	1981-85
A-7D/K	24	6	6
A-10A	532	80	80
F-5E/F	0	6	6
F-15A/B/C/D	342	153	195
F-16A/B/C/D	425	564	714
Total	1,323	809	1,001

TECHNOLOGICAL LEAD OVER SOVIETS

Senator THURMOND. Our technological lead over the Soviets I understand is diminishing. I am somewhat concerned because their production rates are higher than ours.

General GABRIEL. Yes, they do produce more than we produce. When we come out with a new airplane, they come out with one that looks like it outside, but it is never quite as good inside, in my opinion.

The thing that worries me is the technology leaks that we have had over the years have been very damaging. Especially the leaks we have had in radars and computers.

We still have a good jump. We have to continue building new systems if we are going to maintain our technology lead. We can't sit still and fly the ones we have forever.

I know especially with our fighters, the F-15s and F-16s, we have a good lead on them and that will last for some time. There is a necessary balance between readiness today and being prepared for tomorrow's war.

Technology, I think, is the trump card that we hold in the United States because we are never going to be able to outnumber them; we know that. They will always have more than we have. So, we have to be better.

TECHNOLOGICAL LEAKS

Senator THURMOND. Speaking of leaks, what do you attribute those leaks to? Espionage?

General GABRIEL. Yes, a lot is KGB espionage. They target what they need to go for in this country. They know who the contractors are, the people involved.

Then the people, either through bad security or just through selfishness for a few thousand dollars, give away some of the country's most important secrets.

Primarily you are right; they know what to go for and they have agents in this country able to get at it.

Senator THURMOND. It is rather amazing that people in this country, even for a few thousand dollars, would furnish secrets to the Soviets which damage our security.

General **Gabriel**. It is unbelievable.

Secretary **Orr**. Senator, if I can add, I think it goes farther than that. We are such a free society that we willingly give information that we don't get out of theirs.

The defense industry for several years put items in newspapers and magazine advertisements telling how fast our planes will fly, what the range of our missiles is. We are voluntarily giving the Soviets a great deal of information that otherwise wouldn't be available to them.

Senator **Thurmond**. How can that be avoided?

Secretary **Orr**. It is very difficult in a free society. I have encouraged people who come to the big speeches I give to be a little hesitant in what they put in. But this is a competitive world and there is a tendency to say our company does it bigger and better and then describe how much bigger and better.

I do not put the entire blame on them, but it certainly is true that we give away a lot of information.

Senator **Thurmond**. What is the average age of our tactical fighters compared with those of the Soviet Union?

General **Gabriel**. It is a little over 10 years for us. They have a 7½-year average.

CHEMICAL RETALIATORY

Senator **Thurmond**. The single most important issue that this committee will review this year is our lack of a credible chemical retaliatory capability.

What happens to our efforts to reinforce Europe if the Soviets use persistent chemical agents against our co-located operating bases just prior to our arrival?

General **Gabriel**. That would be one of the worst case scenarios we can imagine because we would have to hit the ground running. We do carry with us, of course, the protective suits. On the big aircraft we do.

You wouldn't land a fighter there until the chemical agent went away. So, it would delay us depending on whether you have persistent gas or nonpersistent and the conditions of the wind. It would delay us, say, a day or so probably before we could get into those bases.

Senator **Thurmond**. It could be very detrimental, could it not?

General **Gabriel**. It could be. Not just getting in there, but once you get there, if there is an across-the-board attack against us, that is also the worst case because you cannot operate very well in a chemical environment.

B-1 BOMBERS

Senator **Thurmond**. Mr. Secretary, there has been some concern in Congress that the Air Force may attempt to buy more than a hundred B-1 bombers and that this will slow down the advanced technology bomber program.

Is it the Air Force's intent to terminate the B-1 program as scheduled?

Secretary ORR. The President's program calls for only 100 B-1B bombers and we are obviously guided entirely in supporting the President's program.

We have no internal plans whatsoever to buy the 101st B-1B bomber.

C-130 AIRCRAFT

Senator THURMOND. General Gabriel, each year the Congress adds money to the budget to buy C-130 aircraft for the Guard and Reserve to replace the very old A model C-130s. The Guard and Reserve feel that these planes are borderline safe to fly.

A recent crash off the coast of Honduras that claimed 21 lives was reported to be an A model C-130.

Was that plane an A model?

General GABRIEL. That was an A model plane.

Senator THURMOND. Has the Air Force determined the cause of the crash?

General GABRIEL. No. We have not completed our investigation. But the first look indicates that the model of the aircraft probably had nothing to do with it. That is the first C-130 A model we have lost in over 4 years.

I agree with you, we do need to continue modernizing that force. They are very old.

C-131 AIRCRAFT

Senator THURMOND. General Gabriel, last year Senator Quayle and I added a provision to the authorization bill that would modernize C-131 aircraft for the Air National Guard.

What is the status of the program and when will the first plane be modified?

General GABRIEL. I would like to submit that for the record, sir.

[The information follows:]

C-131 A/C FOR ANG

The Air Force will present a total plan for Air National Guard Operational Support Airlift (ANG OSA) to Congress by 1 April 85. This plan will address wartime missions, replacement aircraft, airlift support requirements, and C-131 modernization. C-131 modification is one facet of this overall plan and will be considered in our implementation of the approved total plan.

Senator THURMOND. Those are all the questions I have for the moment.

Thank you very much. Again we are pleased to have you with us.

Chairman GOLDWATER. Senator Bingaman.

Senator BINGAMAN. Thank you, Mr. Chairman.

Mr. Secretary and General, how are you today? It is good to see you. Let me ask you a couple of questions.

AIR FORCE REAL GROWTH

What is the real growth in the Air Force budget in 1986 as you have presented this budget to us? What is the percentage increase?

Secretary ORR. Real increase without inflation: 5 percent.

Secretary BINGAMAN. Plus inflation.

Secretary ORR. Five percent plus inflation.

Senator Bingaman. What do you anticipate in the next 3 or 4 years?

Secretary Orr. Our preliminary anticipation from the Department of Defense is that our budget will have a 1 to 2 percent increase for 1987 to 1989, as I remember.

Senator Bingaman. Now the figures that Secretary Weinberger gave to us on Monday were that there was an 8.2 percent estimated increase in 1987, 8.8 percent estimated increase in 1988.

Those are real figures for the Defense Department as a whole?

Secretary Orr. That is correct.

Senator Bingaman. Where is the money going if you are not getting any of it?

Secretary Orr. It will be divided, obviously, between the other two branches. We picked up with our B-1 and MX. As procurement for those programs phases out, we are scheduled to get very much lower increases than the Army and Navy.

I don't have the growth in mind for the other two services. I will submit it for the record. Ours is not in that category.

[The information follows:]

FISCAL YEAR 1986 BUDGET—REAL GROWTH

The Air Force anticipates an average annual real growth of approximately three percent through fiscal year 1990. Growth numbers are subject to specific yet variable economic assumptions and should not be used as the only indicator of defense capability growth. The Army and Navy budgets can be expected to grow as a percentage of the tri-service requests as the larger Air Force procurement programs like the B-1 and Peacekeeper begin to wind down and other programs, such as the Navy's revitalized shipbuilding program, begin to come on-line. All services are projecting much lower growth percentages as we approach fiscal year 1990.

40-WING TACTICAL ARM

Senator Bingaman. In light of that anticipation of getting less in the way of increase in the next several years than you are this year, there is an article in "Defense Week" that says—I don't know how authoritative you consider "Defense Week,"—but the February 5 issue says, "For the fourth year in a row the Air Force has delayed, this time for 2 years, its ambition to build a 40-wing tactical arm."

Is that accurate that you have delayed it and if you have delayed it under present funding, when are we ever going to build this thing?

Is this realistic to expect that we will ever do it if we can't do it now?

Secretary Orr. I would have to say that knowing what our increases will be, we have planned in that direction. The article is accurate. We had hoped in 1981 when I became secretary that we would be much farther along to 40 wings than we are.

We have actually grown some 600 planes in the last 4 years, but we are doing it in part by retaining the older planes.

As we were indicating to Senator Thurmond, the age is gradually creeping up. When we have phased down the funding for our two bomber programs, when we have phased down the two airlift programs, C-5 and C-17, even with more modest increases, our present plan, I hope, is to go to—we are requesting 228 fighter planes this year and we have hopes to continue at 228 next year.

So, we have taken that into account.

Senator **Bingaman**. What year are we planning 40 wings now?

General **Gabriel**. 1991 right now. It is the most frustrating thing in the world to chase those 40 wings. It is a matter of priorities at the moment.

As I said before, we didn't do a lot with our strategic capabilities back in the seventies. We have two legs of the triad, the bomber and the missile, and right now they have higher priorities than enhancing our fighters.

CIVILIAN PERSONNEL

Senator **Bingaman**. Let me ask, I think it is on page 7 of your statement here you indicate that you are going to try to add 10,300 civilians to the Air Force this year.

If that is the case, how do you expect the proposed 5 percent cut in civilian pay to affect it?

Secretary **Orr**. I don't think we know the answer. We will advertise for people and hope to get them. I imagine that most Federal employees look upon that 5 percent as a one-time temporary cut. In their hearts many of them hope that it will be made up in the following year.

This was true in the military when we had a year in which we didn't get the increases the Secretary wanted and he promised at that time to the military people he would try to bring it back. That promise has not been made to civilian employees, but I would not be surprised if many of them hold that in their heart.

TECHNOLOGICAL LEAD OVER SOVIETS

Senator **Bingaman**. Let me ask about a comment Senator Thurmond made. He said in one of his questions that our technological lead over the Soviets is diminishing. That is not the information I receive from the Defense Department generally.

I would be anxious to get your opinion if that is accurate. It seems to me we have put a lot into Defense in the last 4 years. I saw statistics yesterday that there has been a 46 percent increase for 1986 over 1981.

If our technological lead is still diminishing, under those circumstances, I would be interested in hearing your views on it.

Secretary **Orr**. I would like to give you a corollary position. I think one of the serious things we face in a technological way is that we are graduating about 60,000 engineers this year while the Soviets are graduating 300,000. Some of ours will go into defense, nearly all of theirs go into defense.

Soviet students today take 8 years more of hard subjects in high school than our students do, 4 years more physics, 4 years more calculus, 1 to 2 years more chemistry, and so forth.

One-half of our high school graduates do not know enough math and science to allow them to go to an accredited engineering school.

I am concerned that our technological lead will slip over a period of years, but these high school students who are not taking hard subjects, not going into engineering, are going to make a big difference 20 years from now.

CUTS IN EDUCATIONAL FUNDING

Senator **Bingaman**. You are suggesting that is a concern that you have. The President has again proposed some cuts in educational funding this year for the third or fourth year in a row.

Do you see those as impacting?

Secretary **Orr**. Let me say we are getting into an area that I am only familiar with because I was his budget director in California. I know how he thinks. He thinks education is a local level problem, not a Federal level problem. I am not sure this committee is the place to debate it.

Senator **Bingaman**. You are saying at the local level our educational system is going to cause us severe problems as far as our Defense capability at the Federal level is concerned?

Secretary **Orr**. I am very much afraid that unless we change our emphasis at the local level from the softer sciences, softer subjects, to the harder, it will.

TECHNOLOGICAL LEAD

Senator **Bingaman**. General, do you have a comment on our technological lead being diminished?

General **Gabriel**. There is no question we still have a very good lead in those areas I mentioned, radar and computers and mircrochips. There is no question about that. Two examples of my concern.

One is the case of the satellite where someone sold for a very few dollars the book on this satellite. I think you recall the incident.

The other is the radar on the F-18.

If those kinds of things continue, obviously it will help them close the gap. I do think they are closing the gap, but we have a very good lead, especially in space, avionics, computers and radar.

Senator **Bingaman**. Thank you.

HEALTH CARE SYSTEM IN AIR FORCE

Mr. Secretary, you refer to the health care system and the medical care system in the Air Force.

What would be your reaction to a proposal that much of the peacetime health care needs of the military dependents could be provided by the civilian sector through more contracting with the civilian sector and less actual bricks and mortar in the military?

Secretary **Orr**. I would not be very favorably inclined. I go to many bases. I also know in the Department of Defense we have been making strenuous efforts to get away from CHAMPUS as it is called because civilian care is more costly than our inhouse care.

Senator **Bingaman**. If it is shown to be competitive cost-wise, then you would have no problem with it?

Secretary **Orr**. I would still have a problem. To illustrate, at Minot AFB, we have a little clinic on base and a hospital that is 20 miles away. Anything very serious and urgent has to go to the hospital. Because of the weather conditions in December, it is not an easy time if you have a pregnancy and you have to try to get there.

Senator **Bingaman**. What I am interested in is in our larger cities where in many cases we have nearly 50 percent of the beds vacant in our civilian hospitals today. We are getting requests—to build additional military hospitals in some of those same communities.

It raises questions in my mind as to whether we are making adequate use of what could be provided by the civilian sector, at least with regard to the Defense.

Secretary ORR. I look at it a little differently. I was the director of a big civilian hospital in Pasadena for many years. I think a good bit of overbuilding in hospitals is strictly their own fault.

If one hospital gets a computer aided tomograph (CAT) scanner, everybody else has to get a CAT scanner even though there is not enough business for more than one CAT scanner.

I think the internal hospital competition has been responsible for a lot of the overbedding in hospitals.

Senator BINGAMAN. My time is up. Thank you very much.

Chairman GOLDWATER. Senator Gramm.

Senator GRAMM. Mr. Chairman, we all like to defend our political decisions, but it must be tough to have to talk about Federal aid to education when we have had 20 years of decline in quality of test scores, we have had 20 years decline in mathematics and science and linguistics requirements under expanding Federal aid.

We cut back Federal aid in 1981. We have had a reversal in 2 of the last 3 years of test scores and requirements on average for math and for science and for linguistics have risen substantially in those 3 years.

It is a good argument that Federal aid increases quality, but the facts don't bear it out.

Mr. Secretary, there was confusion that was present in your response to Senator Bingaman's statement about expenditures in the Air Force. When you are talking about expenditures leveling off, you are talking about budget authority being given to the Air Force leveling off?

You are not talking about outlay because in fact under your budget we are entering the heavy production schudule on the B-1 and the MX and in terms of outlay, out-of-pocket expenditures, as the guy on the street understands it, which is where the meaning of the word comes from, we actually have substantial increases in expenditures in the Air Force the remainder of the decade.

Budget authority commitment to the future is leveling off; is that right?

Secretary ORR. I was thinking total obligational authority.

MX

Senator GRAMM. Mr. Secretary, one of the things I am concerned with as we go into the debate over MX is that so much focus was put on the debate about the basing mode in the Carter era, that it became really the focal point of debate in the Congress.

One point that is missing in that debate is what is the alternative to MX? Let me ask you in terms of our ICBM force in terms of obsolescence and accuracy, in terms of danger to the crews that man the missiles, what are we looking at in terms of serviceable life in our current ICBM systems?

Secretary **Orr**. We have a program to upgrade the Minuteman. As you point out, the missile force is aging and we have problems with it. We conduct seven flight tests every year with these missiles to assess their reliability.

We are doing everything we can to make sure that we have a reliable system in the ground out there. Also we are trying to improve its accuracy somewhat. That is a concern. It is an old missile.

OLDEST MISSILE

Senator **Gramm**. How old is our oldest missile that is currently part of the triad in ICBM's?

General **Gabriel**. We put the first Minuteman I in the ground in 1962. We have had many modifications to Minuteman since then, replacing Minuteman I with Minuteman II and III, but the first ones went into the ground at that time. The oldest Minuteman currently on alert went in the ground in 1966.

Senator **Gramm**. What was the projected serviceable life of that missile and what missile are we talking about?

General **Gabriel**. We are talking about the Minuteman. The serviceable life I am not that familiar with, but I will provide that for the record.

[The information follows:]

ICBM PROJECTED SERVICEABLE LIFE

Minuteman III missiles were first deployed in 1970 with a serviceable life goal of 10 years. Since then, the Air Force has conducted predictive failure analyses with the intent to extend the service life expectancy. As a result of that effort, we now expect the first stage motor to be reliable for over 22 years, and the second and third stage motors to be reliable for 17 years. A program is underway to replace the second and third stage motors prior to their age-out. Delivery of these motors will begin in 1986. Through predictive analyses and replacement programs such as these, we expect the entire Minuteman system to be reliable through the end of this century.

Senator **Gramm**. Your guess would be that we are approaching or that we have reached that life?

General **Gabriel**. Yes, sir. I would say 25 or 30 years, not much more than you would expect from the bombers and fighters.

Senator **Gramm**. General, you would agree with my premise then that an issue in the debate over MX far beyond the basing mode debate is whether or not we are going to have a modern serviceable weapon as part of the triad or whether we are going to have, in essence, a unilateral disarmament because of obsolescence?

General **Gabriel**. Yes, sir, I think that is a good way to put it because the missile force is aging and we can only do so much to keep it alive and make sure it is still a reliable system.

MIDGETMAN

Senator **Gramm**. As you are aware, there has been much discussion in Congress about the so-called Midgetman. That is often used as justification for not funding MX.

If you look at the Scowcroft Commission report that gave rise to the Midgetman, it was clearly prefaced on an arms treaty with the Soviet Union, clearly recognized that the Midgetman, because of the 1 warhead compared to 10, could never be a substitute for the MX.

Without an arms agreement, can you see any way that the Midgetman at a price the Air Force could afford to pay within the kind of budget we are talking about, knowing that the Congress is talking about cutting this budget further, can you see any way that the Midgetman could substitute for the MX?

General **Gabriel**. No, I would not see a way to do that. As Scowcroft and his commission put it, the MX, small missile and arms control are a package.

There is another way to look at that. We have to discuss this with the Soviets before we get to the small missile deployment, the MX is our one new missile. If we are not planning to undercut SALT, we cannot flight test Midgetman full-up until we make arrangements with the Soviets.

DOD REORGANIZATION

Senator **Gramm**. As you are aware, a distinguished minority member of this committee has worked extensively on a reorganization plan for the Pentagon. It is a plan, in my mind, that harkens back to the management area of the forties and fifties when the logic seemed to be that the way you manage a corporation or a large bureaucracy is to have a group of, in a hidden tower somewhere, managing decisions. The authority comes from the top down in imposing those decisions.

Having now been involved in trying to make the Air Force work as part of that vast bureaucracy across the river, do you believe we have too much centralization of authority now or too little?

Secretary **Orr**. I would like to provide that for the record. I work for Secretary Weinberger.

[The information follows:]

CENTRALIZATION OF AUTHORITY

The existing structure has neither too much nor too little centralization of authority. The existing statutory guidance provides a sound framework for the interaction of the civilian and military leadership. As a service secretary, I perform a coordinating role between the Office of the Secretary of Defense and its staff and the Air Force. As the principal civilian advisor on Air Force matters to Secretary Weinberger and as the head of the Department of the Air Force, a service secretary mediates the interests of both groups. As such, he reflects the breadth of perspective that Secretary Weinberger expects from his service managers. The existing structure is sound and functioning in accordance with existing law. The relationships among the principals are excellent and, as a result, facilitate an open and dynamic approach to satisfying defense requirements.

Secretary **Orr**. In answer to your question and not specifically about what one of the members of the committee has done, but referring to a statement made by a former Chairman of the Joint Chiefs and former Chief, I think that the three service secretaries, the four chiefs and the Chairman and the Secretary of Defense, and the Deputy Secretary all feel that the system is about right at the present time.

There may be some minor alterations in organization, but I don't sense among any of us who are over there now a burning desire for change.

Senator GRAMM. Let me ask you two additional questions within my time constraint.

No. 1. In trying to be efficient in running the Air Force, how often do you run up against restrictions in law, restrictions on dual sourcing, for example, as we face an Army with the purchase of engines for the M-1 tank, restrictions imposed on you by Congress that limit your efficiency and your options?

Secretary ORR. Senator, I am really not going to place much of a burden on Congress. There are occasional problems that I run up against. Sometimes we wonder why a law was put in. Sometimes the law requires us to do only what we are already doing.

Basically, I would not have to reply in the affirmative that I am severely hampered by congressional restrictions.

Senator GRAMM. Let me ask you one last question.

If you were able to bring Air Force procurement directly under your control so that you were accountable for your procurement, do you think you could do a better job with it?

Secretary ORR. No. I feel that I am properly accountable and responsible now. I have to go occasionally to the Secretary of Defense and obviously once in a while we lose something we want to win, but I cannot say that I lack the responsibility and, therefore, when things go wrong, I have to take the responsibility.

When we buy a $7,000 coffee pot, it is my responsibility. I run the Air Force. I have the manpower and the authority to correct it.

Senator GRAMM. When that decision was made, though you are responsible, no question about that, what agency made the final buy decision on that?

Secretary ORR. Those decisions were made by the Air Force Logistics Command which buys our spare parts.

Senator GRAMM. Thank you, Mr. Chairman.

Chairman GOLDWATER. The Senator from Illinois is next.

Senator DIXON. Thank you, Mr. Chairman.

Mr. Secretary and General Gabriel, I thank you for your very interesting testimony this morning. I agree with your statement, General, that we have the finest Air Force in the world.

As the ranking member of the Manpower and Personnel Subcommittee, I supported increasing your numbers last year, I supported the new communications facility for MAC at Scott Air Force Base and a variety of other things, and continue to support your major objectives.

SONICRAFT, INC.

I have a concern this morning that I would like to direct to you about a contract for Sonicraft, Inc., which is the Nation's largest minority-owned Government contract.

There is a very substantial article in Crane Chicago Business by Paul Merriam who is the Washington editor of Crane which suggests that the Strategic Air Command wants to replace Sonicraft, the Nation's largest minority-owned Government contractor in Chicago, as a prime contractor for secure communications systems to link SAC bases and bombers with the President and other authorities in the event of a nuclear attack.

I would like to ask you some questions about that, if I may.

Secretary **Orr**. I think I am probably more familiar with that than the General is.

Senator **Dixon**. Thank you, Mr. Secretary.

First of all, as background, the recent full-scale development, as I understand it, began with a 2-year phase, to end in March 1984 and this was a detailed design phase with four major scheduled milestones which were design reviews.

I am told Sonicraft completed three of the four reviews successfully on schedule. The fourth review, I am told, was 2 months late, not an unusual occurrence, I am told, in a high-risk, full-scale development program.

I am told the critical design review was a 9-day detailed review of Sonicraft's design which resulted in only 17 actions. At its completion, Sonicraft, I am told, was within the negotiated cost and 2 months over schedule.

I would say on the basis of my experience here that that is highly successful in terms of most development contracts.

In periodic status reports to the Deputy Secretary of Defense over the 2-year period, the Air Force indicated the program was going well.

In May 1984 the Commander of the Air Force Electronics Systems Division, General Stansberry, told the Small Business Administration that Sonicraft was equal to or better than most of his contractors, including larger ones.

In November 1984, the Air Force was attempting to cancel the Sonicraft contract.

My question, Mr. Secretary, is, why has the Air Force been attempting to back away from its commitment 6 months after its own leadership was praising Sonicraft's performance?

Secretary **Orr**. Senator, you obviously have a great deal more detailed information than I and I will be pleased to review it with you at your convenience. My information is not as optimistic about Sonicraft, not as optimistic about some of the factors into which the Attorney General is now looking.

I think we have some facts that we need to get on the record.

Senator **Dixon**. Could I ask you this further question?

Given the high level of publicity and the impact of this program which was profiled by the Air Force and the importance it will have on the DOD minority business program and minority business in general, what did the Air Force, in your opinion, do to ensure the success of the program?

Secretary **Orr**. The Air Force is still working to try to ensure the success of the program. We are working very hard with Sonicraft. The program has not been canceled.

Senator **Dixon**. Now I ask you, Mr. Secretary, if it is your present intention to continue that program?

Secretary **Orr**. It is our present intention to continue to make Sonicraft a successful producer of Phase I.

Senator **Dixon**. I have a series of questions here, Mr. Chairman. I would like to go through some of these.

Is there someone here, in your opinion, Mr. Secretary, either the General or yours, or in the supporting group, that might answer some of these questions?

Secretary Orr. I doubt it, sir. We do not have such a person in the audience.

Senator Dixon. Mr. Chairman, I just received a communication from you, I think, indicating that you are going to have the Tactical Warfare Subcommittee be the whole committee.

Is that the intention of the Chair?

Chairman Goldwater. No. Under the new rules of the Senate, we are limited to five subcommittees. As it stands now, we, in effect, have about seven. So we are going to meld the Tactical Warfare Subcommittee into the full committee and Senator Kennedy will continue to be the ranking minority member and I will be the ranking majority member.

That will give us the opportunity to make official Senator Quayle's very important Subcommittee on Defense Acquisition Policy. Of course, that is not official yet.

Senator Dixon. May I explain my problem, Mr. Chairman?

The Secretary does not have the answers to my questions, which I understand. It is a matter that he has not been fully briefed on. It is a matter that just came to my attention.

In all fairness to the Secretary, I fully understand why he would not have the answers to the questions. I would like to have the answers to these questions, which are very important in my State and very important to a very important minority business housed in my State.

I would like to have another hearing at the earliest opportunity by what you would now consider to be the jurisdictional subcommittee.

In the last session of the Congress it would have been Tactical Warfare, which the chairman knows I am a member of and I would have liked to ask the Chair to grant me a hearing at the earliest opportunity with the Secretary and his supporting personnel to be here to answer all the questions.

In fairness to the Secretary, I can understand why he would not have the answers today.

Chairman Goldwater. As we sit here talking, I am not really the chairman of this committee. I may be assuming a lot, but I assume I am.

Senator Dixon. You have a very good chance of becoming the chairman. [Laughter.]

Chairman Goldwater. If I don't say the wrong thing, I might have a chance. We don't even know how many members you are going to have. We know on our side how many we have. I had hoped today, and I still hope possibly to have a semiofficial meeting of the full committee.

I tell you that I will promise you at the first tactical hearing, which I believe is March 4, I will ask the staff to be sure that that subject is brought up.

Senator Dixon. I thank the chairman very much. It is very considerate of the Chair. If we can do that on March 4, I will be prepared to ask more questions of the Secretary at that time.

I thank the Chair for his consideration.

[Off the record.]

Chairman Goldwater. The committee will go back on the record.

I think you were next in line, Senator Wilson.

Senator **Wilson**. Thank you, Mr. Chairman.

First I want to commend Secretary Orr and General Gabriel. I want to express the high confidence I have in the leadership and the managerial skills that you have both exhibited.

Let me pick up on the line of questioning by our now departed new member, Senator Gramm. I will preface it by asking whether you read the other day the comments of former Secretary of State Vance before the Foreign Relations Committee?

MX VERSUS MIDGETMAN

He urged on the committee the wisdom of forsaking MX and embracing Midgetman.

Are you familiar with that?

General **Gabriel**. Yes.

Senator **Wilson**. My own judgment is that Midgetman would more appropriately be called Congressman because it has been more shaped by political considerations than military. I think we have rushed to embrace it. I find all too many of my colleagues who have adopted it as an easy rationale for opposing MX, embracing wholesale the concept of Midgetman.

I gather from your response to Senator Gramm that you agree with his point and mine which is that the Scowcroft Commission in making their recommendations had a sequence as well as linkage in an arms control context between both MX and a mobile missile on which they recommended research?

General **Gabriel**. That is right, sir.

Senator **Wilson**. In your military judgment, if we do not have a sufficient MX force and if we do not have a secure agreement with the Soviets limiting warheads or throw weight, you think, I gather, that there will be little incentive for the Soviets to ever come to such an agreement?

General **Gabriel**. Yes, I would agree with that.

Senator **Wilson**. In that instance our reliance primarily, and very heavy reliance on the small mobile missile as our chief land-based deterrent poses some real problems; would you agree?

General **Gabriel**. I agree. If you take the MX out, it is a whole new ball game.

Senator **Wilson**. Let me pursue some of the concerns I have expressed.

Incidentally, I have sent a copy to both you gentlemen of a letter I have written to the chairman of the Strategic and Theater Nuclear Forces Subcommittee, Senator Warner, first as an indication of why I call it Congressman. It is so weight constrained by congressional mandate that with the present guidance system, I am advised by the Air Force, it cannot contain penetration aids.

Is that statement correct? At least not without sacrificing range?

General **Gabriel**. It will be hard to do, but we can have some aids on it and the aids will be a problem. We will have a light weight guidance system on it to give us the accuracy.

Senator **Wilson**. Without the penetration aids, would you agree it will be spectacularly vulnerable to even a rudimentary Soviet ABM system?

General **Gabriel**. We would not be able to get into areas like Moscow easily.

Senator **Wilson**. Has the Air Force with the present weight constraints examined the possibility for adding to it such things as insulation against laser attack in space? Would you not be constrained by the weight limit?

General **Gabriel**. The weight limit would make it a lot harder to do. If we stay with 30,000 to 33,000 pounds, I am told we will be able to do it, but the technical risk will be higher.

Senator **Wilson**. What about boost phase intercept? Do you not run into the same kind of problem because of the weight limitation which Congress has imposed?

General **Gabriel**. Yes, it will be a problem.

Senator **Wilson**. Mr. Chairman, it seems to me for the reasons I have set forth in a letter to Senator Warner that the Air Force should be relieved of the present schedule on which we have set them.

I think we have imposed upon them a schedule of great haste. I think there are a number of questions that remain unanswered.

Let me pursue a couple more questions to make the point.

MX BASING PROBLEMS

First, if we have had problems with basing of the MX, I suspect we ain't seen nothing yet when it comes to basing a mobile missile by definition of mobility.

This is not the Soviet Union where we can impose upon a docile passive citizenry a number of risks that they don't wish to take.

I think that the basing of this as a mobile missile, which is what you are required to do under the congressional mandate, is going to bring to the surface problems that we have not even dreamed of.

I am told it will require something in the neighborhood of 50,000 men to operate and secure the number of mobile missiles, small missiles, that we are talking about, and that may cost from $50 to $100 billion.

General **Gabriel**. I don't think we can be that precise, but it will be manpower intensive. It will take a lot more men, yes.

Senator **Wilson**. Would you agree that the difficulties of this obtrusive mobile basing method is going to pose some problems with respect to public reaction?

General **Gabriel**. We anticipate that. We are trying to get everything on Government land, but we might not be able to stay on Government land at all times.

Senator **Wilson**. The Air Force response indicated that they thought mobile basing was workable. I think that is a very optimistic assessment because I suspect it is not workable.

Before we lead to the conclusion, I think we had better test it out very considerably. One thing Congress should do is set you back on the path with a new instruction and that is examine stationary basing in a hardened silo.

Would you agree?

FOUR BASING MODE OPTIONS FOR MX

General **Gabriel**. That is one of the basing mode options. We have four different options, soft mobile, hard mobile, the super hard silo, and deep underground.

We are spending money to research each of these methods. It is not nailed down exactly where we will go, but the hardened mobile concept has gotten most of the attention.

Senator **Wilson**. Mr. Chairman, at a subsequent meeting of the Strategic Subcommittee I intend to pursue this further. I note, not with pleasure, but at least with some satisfaction as well as concern, the statements of General Gabriel on the record this morning that without a sufficient MX force, before we have such an agreement with the Soviets on warhead and throw weight limitations, we are unlikely to get one, that there are severe problems because of weight constraints on the missile in terms of its design, in terms of its adequately being protected and in terms of the basing mode.

So, I do hope that the committee will examine those questions and give the Air Force some direction.

Let me shift subjects now.

AIRLIFT MASTER PLAN

First, I assume that the statement you made last year concerning airlift considered that the Airlift Master Plan is current and that its recommendations are still one of the higher priorities of the Air Force?

General **Gabriel**. Yes, it is current and it is doable.

Senator **Wilson**. During the discussion as to the number of B-1B bombers that should be procured, one of the reasons that was advanced by some proponents of the number of 100 was that that would provide a hedge against some technology and cost uncertainties associated with the development of the advanced technology bomber.

The budget presently does not provide for any option that would protect that hedge during the period between the completion of production of those 100 B-1Bs and the IOC for the advanced technology bomber.

Do I infer that you no longer see this hedge as necessary?

Secretary **Orr**. I think we are coming along satisfactorily. We seem to be making good progress on the Advanced Technology Bomber. At the moment I don't know of any show-stopper, Senator.

Senator **Wilson**. Do you think there is still merit in providing some competition for the Advanced Technology Bomber?

Secretary **Orr**. I think the competition has already been there to the limited extent it exists. The producers of the Advanced Technology Bomber today know if the price comes in too high, the 101st B-1B might be waiting in the wings in some people's minds.

I think the B-1B has been held down very satisfactorily within cost by the knowledge that the Advanced Technology Bomber was on paper and is rapidly progressing.

There has been in the background elements of competition even though the two planes were not in production at the same time.

Senator WILSON. You got an agreement from Rockwell and let me ask whether you anticipate getting a similar agreement from the contractor with respect to the Advanced Technology Bomber?

Secretary ORR. We expect to bargain just as hard as we can.

Senator WILSON. In your view, the funding for the ATB is adequate to meet or exceed the schedule?

Secretary ORR. Well, we are so far away from production yet that it is difficult to have even a should cost estimate, but I have heard nothing from our people that would indicate a flaw in our funding.

Senator WILSON. I think there is some inconsistency between that last answer and the other one you gave me.

Secretary ORR. I am not aware of any inconsistencies in the statements.

Senator WILSON. It is that far off that we can't be certain?

Secretary ORR. We have not built the first one yet.

Senator WILSON. I am aware of that. What you are really telling me is that you intend to drive a hard bargain.

Secretary ORR. That is the best we can do at this point.

Senator WILSON. Thank you, Mr. Chairman.

Senator QUAYLE. General Gabriel, could I get your staff to come up and brief my staff on the re-engining of the C-131 aircraft sometime next week?

General GABRIEL. We will be happy to do that.

Chairman GOLDWATER. Senator Levin.

STEALTH BOMBER (ATB)

Senator LEVIN. Mr. Secretary and General Gabriel, first on the B-1 and the Stealth, is the Stealth bomber on schedule?

Secretary ORR. Yes, sir.

Senator LEVIN. There has not been any slippage?

Secretary ORR. No, sir.

Senator LEVIN. Is the amount of money that is being requested this year for the ATB and projected for 1987 the same amount, without getting into what they were, but are they the same amounts as were projected last year for fiscal year 1986 and 1987?

Secretary ORR. I don't know, sir. I can provide it for the record.

We debated within the Department of Defense altering the funding in outlay from one year to another, not in obligational authority, but in outlay.

I think we are still on the same plan that was submitted a year ago, but I will check that and get back to you.

[The information follows:]

ATB

Yes. The amounts of ATB money requested for 1986 and 1987 are essentially the same amounts as were projected last year, but the 1986 request has been reduced somewhat to reflect improved cost estimates.

MINUTEMAN

Senator LEVIN. A couple questions on the Minuteman missiles.

General, I think in answering Senator Gramm's questions you indicated you wanted to ultimately replace those missiles at some point and you want to build the MX. I don't want to get into the MX-Midgetman. I just want to talk about the Minuteman missile itself as a weapons system.

Is it a reliable weapons system?

General GABRIEL. They are increasingly reliable. We have an upgrade program working now to improve the reliability and maintainability and also the accuracy. They are still reliable, less so than when they were built.

Senator LEVIN. A few years ago the Air Force told us the following, that the Minuteman is very reliable now and is expected to continue to be a key weapon system through the year 2000.

Is that still your position?

General GABRIEL. I think as a result of what we are doing now, they will be a viable weapons system in the year 2000. They could be if we continue working on them, yes.

Senator LEVIN. Would you also agree that the same letter said that currently planned life extension programs will be complete in 1993 with the installation of the last new Minuteman stage 2 motor, at that time the weapons system's life could be extended into the 21st century?

General GABRIEL. That is what I am saying, yes.

Senator LEVIN. So, we have a reliable system?

General GABRIEL. It is reliable. It is not as effective as MX, but it is reliable.

Senator LEVIN. I am not trying to talk about the MX. I do want to try to see if you are leaving an impression here about Minuteman that reflects what I have understood the Air Force views to be for many years, which is that the Minuteman is a very reliable system now and is expected to continue to be a key effective weapon system through the year 2000.

General GABRIEL. I agree with that.

Senator LEVIN. Would you also agree, General, that in fact we did modernize our strategic forces in the 1970's, and I will read you some of the improvements.

We deployed 550 new multiple warhead Minuteman IIIs, deployed 496 multiple warheads for Poseidon SLBMs, 216 new multiple warhead Tridents SLBMs, 1,100 nuclear short-range attack missiles, completed R&D and initiated production of air-launch cruise missiles.

We doubled the yield and destructive power of the Minuteman III warhead, beginning with the deployment of MK-12A reentry vehicle, we upgraded the guidance system of Minuteman ICBMs.

Would you agree to make this record complete and accurate in terms of your own assessment, that in fact there were force improvements in the 1970's?

General GABRIEL. This is what I said. We have done some modifications on the system we put in the ground in the sixties to keep them viable and try to make them better.

Senator LEVIN. Did we deploy Minuteman III's in the seventies?

General GABRIEL. Yes, the last Minuteman III was deployed in the mid-seventies.

Senator LEVIN. But we did deploy Minuteman III's in the seventies?

General GABRIEL. Yes. We deployed the last Minuteman III in 1975.

Senator LEVIN. Would you agree we deployed SLBM's in the seventies?

General GABRIEL. SLBM's, yes, but they are not hard-target kill capable systems.

Senator LEVIN. You made a general statement about modernizing our strategic systems.

General GABRIEL. I was simply talking about the land-based ICBM when I said that.

Senator LEVIN. Relative to land-based ICBM's?

General GABRIEL. Yes.

Senator LEVIN. You would agree that we deployed 550 Minuteman III's in 1970 to 1975? Would you agree with that?

General GABRIEL. Yes.

PAY COMPARABILITY

Senator LEVIN. I won't go into all the other ones.

Now, talking about pay comparability, Senator Gramm has explored the question that a lot of the money we lay out goes for pay.

The question is: Are we buying anything in trying to retain pay comparability and other benefits? Does it buy us anything militarily in terms of our security?

General GABRIEL. In my mind our people are the trump card we have over the other side. We have the best quality people we've ever had. All the services will tell you that.

Senator LEVIN. Are you saying that our effort to maintain pay comparability, the amount of money we try to pay our people buys us something in terms of military security?

General GABRIEL. Yes, it is not only buying something; it is the right thing to do. The troops deserve it for their sacrifices.

Senator LEVIN. I could not agree with you more, by the way, in terms of the right thing to do. I am trying to focus on whether we are buying something for military security.

Does the amount of money we pay and the benefits we try to pay achieve something for us in terms of military strength?

General GABRIEL. We think so, obviously. Since the all-volunteer force was put into effect, there has been a tremendous improvement in the quality of our people.

Senator LEVIN. Mr. Secretary, do you agree with the General's comments?

Secretary ORR. I think we have an excellent force. I think we pay them well. I am not sure that if we paid them more poorly, we would have such a good force.

Senator LEVIN. So, we are militarily stronger if we do maintain pay comparability?

Secretary ORR. Yes, sir.

SDI

Senator LEVIN. Let me go back to the General on some of the questions about SDI. I don't know if you are in a position to answer these or not.

Mr. Secretary, if you have any comment, I would be delighted to have you answer, too.

General, are we willing to have our offensive nuclear forces rendered obsolete by a Soviet ballistic missile defense?

General **Gabriel**. I will have to qualify that statement in order to respond. If we are assured that we have a perfect defense, of course, but not until that time.

You are talking about all nuclear offensive weapons. That is the ultimate goal that the President stated and the Chiefs agree with.

Senator **Levin**. Going back to my question, are we willing to have our offensive weapons rendered obsolete by a perfect Soviet ballistic missile defense?

General **Gabriel**. Yes. The Secretary of Defense has said that. If we get one, we will give it to them.

Senator **Levin**. That is all right with you?

General **Gabriel**. Yes.

Senator **Levin**. So, if both sides have it, we are satisfied that those are perfect, we are going to destroy our own nuclear weapons?

General **Gabriel**. Yes.

Senator **Levin**. Are we working on countermeasures to Soviet ballistic missile defense?

General **Gabriel**. Countermeasures, yes.

Senator **Levin**. Why do we want to help them perfect a defense?

Given your answer, you just told me you want them to have a perfect defense and we want a perfect defense, yet we are trying to produce countermeasures.

General **Gabriel**. We are in a transitional period, offense to defense. You don't go overnight from one concept of strategic war to another.

Senator **Levin**. When are we going to quit designing countermeasures to Soviet ballistic defense?

By the way, I am not proposing we do. I just want to know. I don't understand even theoretically what we are doing here. We are working on countermeasures to Soviet ballistic missile defense, at the same time we hope they perfect it.

Isn't that inconsistent?

General **Gabriel**. Yes, sir. We are facing a real world. All we have is a research program today. It will be a long time before we get to the point where we can make the decisions you are talking about. We have to keep our technology lead. We have to do those kinds of things. They may have the only defense if we don't.

Senator **Levin**. Thank you. My time is up.

Chairman **Goldwater**. Senator Denton.

Senator **Denton**. Thank you, Mr. Chairman.

ARMS CONTROL NEGOTIATIONS

Pursuing that question, we all agree that nuclear war is an appalling contingency. Now, we have the proposition advanced by some rather important people, and the General has reminded us, concurred in by the Chiefs, that there seems to be a way to achieve security while eliminating nuclear weapons through arms control negotiations.

At the outset, I want to say I support the SDI for a number of reasons. But given the tremendous potential imbalance and the apparent extreme cost attendant to providing a conventional deterrent, would we have the political will to pay for such conventional deterrent, and if you don't believe that we do, how do the Chiefs concur in that rationale?

CONVENTIONAL CAPABILITY

General **GABRIEL**. In emphasizing our conventional capability and avoiding war through building up our conventional offensive and defensive weapons.

Senator **DENTON**. At the time there are no more nuclear weapons, has anybody made an estimate of how much it will take to come up in deterrent terms of whether we have to resort to something exotic or equally appalling as chemical weapons?

Taking the other side of the coin, it is pretty nasty to be killed by an ax, or whatever was used to destroy Carthage and not leave a stone upon a stone. We can't, as military men, ignore the appalling prospect of a one-day holocaust, if you will.

You know what I am getting at?

General **GABRIEL**. It would be a considerable amount of money. Right now we spend about 15 percent of the budget on strategic forces. Not all the rest is spent on conventional, but a great deal of it is. It would cost more. We would have some of the money that we spend on strategic forces, to apply to the conventional, but it would take a lot more money.

I am not as pessimistic about our conventional balance as most. We do have our worldwide commitments, as you know. We would have to rely on sequential actions today if we were to get involved simultaneously in several areas as we did in World War II.

I think we have good weapons in the field, the best in the world and the best people with the best training. I don't think it is that imbalanced. Obviously, in Europe, and that is where it is usually compared, we don't stack up. We have a lot of work to do. I think if we made the shift to strategic defense we could maintain an adequate conventional balance.

I don't have the exact figure of what it might take, but it would be at considerable expense.

Senator **DENTON**. In other words, the concurrence of the Joint Chiefs in that rationale for the justification of the SDI, and so on, is based on an inherent assumption that it would be expensive in some major increment to come up with enough conventional forces?

General **GABRIEL**. Yes, this is true, and we most likely would not be spending as much on the nuclear offensive forces at that time. This could cut down the total difference.

Senator **DENTON**. Mr. Secretary and General, I am going to ask you a question I have asked other services.

CUTTING GOVERNMENT SPENDING

The major thrust of the administration and Congress this year, obviously, is to cut Government spending to achieve a balance between revenue and expenditures. The debate has centered on how much to cut the administration's proposed Defense budget. That debate will continue in this committee and elsewhere.

This Senator is less optimistic about the Congress disposing according to the President's proposing this year as we have in the last 3 or 4 years. I am aware that the Chairman especially, and most members of this committee, understand the need to continue to strengthen our defense to assure our country's security, but the prospects in the other House, perhaps on the floor, I am not sanguine about.

We need an understanding of the nature of the Defense budget and how it relates, not to political imagery in cutting this or that sector of Government spending, but to the threat. So, in going into this political imagery, I just want to emphasize again that I am aware that social programs have grown far more rapidly than have expenditures on defense.

If we take the total increase in the past 20 years on Government expenditures and numerically assign 100 to that, social programs have accounted for 89 of that 100 and defense only 11.

Despite the increased Defense appropriations over the past few years resulting in more and better hardware, better readiness, and morale quality of life in all of our services, would you say that the relativity of the threat has increased or decreased from what it was 20 years ago?

General **Gabriel**. It obviously has increased, yes.

Senator **Denton**. I would remind us all again for the record that we were, under John Kennedy, spending twice as much on defense as on social programs. Now the reverse is true. So, I am very determined we not go too far in cutting our defense buildup.

GEOGRAPHICAL MULTIPLICITY OF THREATS

How would you assess the effect on the Air Force's capabilities in the multiplicity of geographic areas in which you now face threats, apart from the totality of the threat as compared to 20 years ago?

We have geographical multiplicity of sources of threats.

Would you care to mention any of the important implications that pertain thereto, such as range and vulnerability of the bases, the situation in Central America, any miscellaneous remarks?

General **Gabriel**. Two obvious ones are Southwest Asia and Central America, as you point out. Southwest Asia is one of the most demanding scenarios you could picture compared with anything else we might be required to do. Distances are 6,000 to 8,000 miles from the United States, much longer than anything else we would be required to do. Lots of lift would be required and this is complicated by the fact that we have nothing in that area to support us in terms of forces on the ground.

Central America obviously is not as benign as it was 20 years ago. We have terrorism which, as you can imagine, we have not found a good way to deal with yet.

TERRORISM

Senator **Denton**. Terrorism has really added another dimension. It, itself, has changed in the past year to the degree that most of my colleagues are not aware of what has happened. For example, a

$1.3 billion seizure of cocaine in Colombia was accompanied by the knowledge that one of four Marxist groups there got a $100 million payoff.

That is, one of four Marxist groups in one little country got $100 million and we are quibbling about $200 million for the whole Caribbean Basin for aid. It is something that requires a further look.

Candidly, gentlemen, I am trying to establish something that I consider to be significant and relatively new and unrecognized. That is that there is a relationship, unseen until now, between failure in national security policy and the health of the domestic economy.

I have reference to a hypothetical assumption that one of the reasons that Saudi Arabia tripled the price of oil in 1973 is that they perceived that the United States was losing sight of what her interests were and was prepared to cop out on the President on the war in Vietnam.

Having seen that, they decided to take advantage of the situation and tripled the price of oil in one day, which they would not have done in 1963.

When you tote that cost up of that one security policy failure, you come out with figures of losses to the American economy in 1970 of more than the annual deficit that is running today.

Do you have any sympathy for the thought that the effects on the national domestic economy are unknown, but very considerably attendant upon failure in security policy?

Africa, for example, minerals and metals, Angola, and what has happened there, the Mideast and Central America.

Do you agree that is something that might be useful in this current debate?

Secretary **Orr**. We have all said in general terms that a nation is more apt to take advantage of our property and people when they perceive America to be weak than they do when they perceive America to be strong.

Teddy Roosevelt said, "Speak softly and carry a big stick." I had not put it in terms of Saudi Arabia and the increase in oil prices.

Senator **Denton**. The key is the effect on the domestic economy, so that you remove the misconception that if you take $10 billion out of defense, you are going to be able to apply it to welfare programs. If we stop building up our defense, it will not give more money to welfare 5 years from now.

Thank you, Mr. Chairman.

Chairman **Goldwater**. Senator Exon has been here a little longer than the rest.

Senator **Exon**. Thank you, Mr. Chairman.

Mr. Secretary and General Gabriel, let me welcome you.

I get the general impression that we are moving along quite well with most of the Air Force's prime objectives. Let me ask a general question.

ANZUS PACT

The difficulties that we seem to be having now with the ANZUS pact between the United States and Australia and New Zealand primarily is a concern of the Navy.

But maybe briefly would you outline, Mr. Secretary, for the committee, or you, General, if you care to add something, as to what problems would accrue to our Air Force operations if ANZUS is scrapped for any reason.

Secretary **ORR**. It could have a very serious impact because we have an important interest in that part of the world, Australia in particular. As you know, we have some key sites there and we exercise with them. We are part of the ANZUS Treaty as well in terms of exercises that go on, not just naval exercises, with Australia, New Zealand and the United States.

It could have very serious impact. We hope it does not. It would seriously interfere with our relationships with Australia and New Zealand.

Senator **EXON**. From the Air Force standpoint, am I correct in assuming that New Zealand might not be as critical to us as our arrangements with Australia? Is that true?

Secretary **ORR**. Yes. Right now we have more going for us in Australia.

Senator **EXON**. Even if ANZUS were to fall apart, that would not foreclose the possibility that we could still cooperate with the Australians at least?

Secretary **ORR**. We still have a bilateral agreement with them.

General **GABRIEL**. Could I say one word, Senator?

Senator **EXON**. Yes.

General **GABRIEL**. We were obviously disappointed at the Australian action in regard to the test of the MX. I think we would not want to lose sight of the fact that only a week before that, I believe, they supported us in our discussions with the New Zealanders on the nuclear equipped ships issue. They have been very supportive in some areas.

REPLACING MINUTEMAN II WITH MX

Senator **EXON**. Mr. Secretary, does the Air Force have any plans at all for the replacement of the Minuteman II missiles with the MX?

Secretary **ORR**. I think they are all Minuteman IIIs.

Senator **EXON**. Since we seem to be concerned about an aging force of Minuteman missiles, why are we replacing our newest Minuteman missiles rather than our older ones? We should be very worried about these aging Minuteman missiles.

Secretary **ORR**. It was a logical decision in the main on the basis of the fields that were best able to take the missile.

General **GABRIEL**. There is another thing, the constraints of SALT. They are both MIRV'd missiles. You would add to the total MIRV if you took a Minuteman II out and put the MX in there.

We don't want to undercut SALT II. We have to watch the total number of MIRV'd systems that we have to include the SLBM's.

Senator **EXON**. What you are saying is that we are caught in a situation from an arms control treaty standpoint that prevents the replacing of our oldest Minuteman force with MXs? Is that true?

General **GABRIEL**. That is true. As the Secretary mentioned, the soil conditions were such that Minuteman III silos are the best place to put them. We are also MIRV limited.

If we had our druthers and were not constrained by SALT II, we would have probably done otherwise.

Senator EXON. If that is true, maybe the age of the Minuteman II and the necessity to replace them may not be as highly important as some have led us to believe. Is that true?

General GABRIEL. That is true. It may not be as urgent as some would say.

Senator EXON. Let me ask you a very hypothetical question.

As an operational commander of a very important part of our deterrent force, if you had the decision to make from a deterrent standpoint now, and if you had today a fully operational and proven MX fully operational in Minuteman silos as well as a fully operational, proven, and tested Midgetman, in a mobile basing mode, which would you choose?

General GABRIEL. MX by far, no question about it. Deterrence is in the eyes of the enemy, the Soviets, and he fears the MX, I think, more than anything else. He knows how good it is.

The Soviet planner will have to figure he will eat all 10 warheads in that one missile and that is deterrence.

Senator EXON. You are telling me, General, that if you had a choice between the two systems, a mobile-based system and a sitting duck, that you would still hold to the MX?

General GABRIEL. You said a mobile based single warhead. There is no question about the comparison there.

If you say, now we are going to have 10 warheads on each one out there, then it depends on the total number of warheads you are talking about and the accuracies. Again, you are speaking of the survivability issue.

The most important thing in deterrence is capability and right now the MX is the only thing in the near future that is going to put those SS-18s and SS-19s at risk.

Senator EXON. General, what you are saying is that you are not persuaded by the argument that has been generally conceded by the Air Force that the 20, 50 or 100 MXs in current Minuteman silos are sitting ducks, because they have been targeted for 10 or 12 years by the Soviet Union, and that without question they would be taken out early by a first strike from the Soviet Union?

That is still true, is it not?

General GABRIEL. I would not use the term "sitting duck," no. In a ride-out scenario we would lose quite a few of them.

What I have been saying all along is that you have to look at it in terms of the Soviet planner, how he is going to plan his attack. He is either going to have a simultaneous launch or simultaneous arrival. He is either going to concentrate his attacks on bombers or missiles there. He can't do both without losing the advantage of surprise.

There are options that I won't go into. Obviously, if he is going for our missile silos, there will be a period of time when we can see his weapons coming. We have sensors that will tell us that.

There are options that obviously don't make them sitting ducks. It would be preferable, if you could have assurance in the best of all worlds, that we would have missiles that were completely survivable.

Senator EXON. My time is up.

So that I can try to understand it, what you are saying is that vulnerability is not as important as we have been told for years. As I understand it, you do not now believe the silo-based MX to be a sitting duck for an early Soviet strike?

General GABRIEL. Survivability was very important. I don't know that we called it sitting ducks.

Senator EXON. What I am suggesting, Mr. Chairman, is that there has been a dramatic change in the ICBM mission requirement and the need for the MX.

Thank you, very much.

Chairman GOLDWATER. Senator Nunn.

Senator NUNN. Thank you, Mr. Chairman.

General Gabriel, pursuing Senator Exon's line of questioning there, you are not saying you prefer 100 MXs in the Minuteman silos to 1,000 accurate mobile single warhead missiles, are you?

General GABRIEL. No. Do we want one MX or do we want one single warhead, as I understood the question.

Senator NUNN. If there were 10 single warheads in mobile configuration with the same accuracy as MX versus one MX in the fixed silo, you would prefer the 10 mobile, would you not?

General GABRIEL. Two things about that. There is a timing problem. As you know, we are not going to get the single warhead mobiles that early. We have not finalized the concept of operations.

Once we could assure ourselves that we could bring the small missile in on schedule and could operate it, perhaps on Government land, and manage to do all the training we need to do and everything else, the cost would be more, but the 10 small missiles would be a reasonable trade with 1 MX. Again, I have to emphasize the timing issue and the fact we have the Peacekeeper in production and it works. The small missile won't be available until the early 1990's.

DOD REORGANIZATION

Senator NUNN. On another subject, I understand Senator Gramm brought up the reorganization plan and attributed it to me and asked you if you were in favor of that plan attributed to me which would take us back to, I don't know what age, but turn all the power over to civilians, and so forth.

I don't know how you responded to that. But, first, I don't have a reorganization plan. If he knows of one that I have, I would like him to show it to me. He is probably talking about the New York Times article on the Georgetown Study Group which said I endorsed it. That is wrong.

I was on the panel. It is a worthy project that deserves attention. I have not endorsed it to the people on the panel. Senator Cohen was on that panel, too.

Senator Goldwater and I worked together with staff very carefully to set forth options for the committee. I am reserving my judgment until those options are presented and we deliberate here in the committee.

I just want to make that clear. I will write Senator Gramm a letter on that. He probably got the impression from the New York Times article.

Let me ask one question on that since I wasn't here.

Have you in your answers to him indicated that you are opposed to that plan by the Georgetown Group?

Secretary **Orr**. I answered the question, Senator, I did not talk to his exact question because I am not totally familiar with the Georgetown Group. I answered it only in respect to statements made by a former Chairman of the Joint Chiefs and a former Chief who have made some presentations extraneous to the Georgetown Group about what ought to be done.

I said that I thought that the three Secretaries, the four Chiefs, the Chairman of the Joint Chiefs, and the Secretary of Defense and Deputy Secretary at this time did not see the need for sweeping changes. Minor changes possibly.

I personally am not favorable to what the former Chairman of the Joint Chiefs proposed.

Senator **Nunn**. I just wanted to make sure you did not get hard set in concrete against the Nunn plan when one does not even exist.

Secretary **Orr**. I did not address such a plan.

Senator **Nunn**. Maybe you are against a Goldwater plan which I may be supporting at some point in time, but we are not there yet. I hope we don't get in so much mischief up here that we all choose sides before we even know what we are talking about.

A couple other questions.

AIR FORCE 5-YEAR PLAN

Secretary Weinberger in his statement earlier this week indicated that the Air Force, under the supposed 5-year plan, will produce 1,184 tactical aircraft during the next 5 years. The figures I have indicate that for the last 5 years you produced 1,495 such aircraft.

Is that approximately correct?

General **Gabriel**. Yes.

Senator **Nunn**. During the 4 years preceding that, that is, during the 4 years of the Carter administration, the Air Force bought 1,745 aircraft.

Does that mean that there were 211 fewer aircraft produced during the last 4 years with more money going into the system than there were in the previous 4 years and you are going to get considerably fewer over the next 4 years?

Does that tell us something about where we are going in aircraft? What are we doing to the tactical Air Force and how is that compatible, first, with the amount of money we are putting in and, second, with the plans the Air Force has to expand the number of tactical air units?

And I am not sure what has happened to those plans. It seems to me they are in some difficulty.

General **Gabriel**. In the mid-seventies, when we were trying to get the first F-15's at Luke AFB, we intentionally emphasized expansion with the fighters, we deemphasized, I don't know whether intentionally or otherwise—munitions and spare parts.

In the late seventies we were short of parts and spares. We were also short of air-to-air missiles and munitions.

What we have done in the last few years has made a world of difference. We can now use that force structure a lot better because we are supporting it fully. For the first time we are at 100 percent of peacetime operating stocks WRSK/BLSS is funded.

That makes a great difference in our capability. We can use what we have.

Another factor in this, of course, is the President's Strategic Modernization Program. We have two legs of the triad so we are spending more for strategic forces than any of the other services.

Senator Nunn. The strategic has taken the priority?

General Gabriel. That plus the fact we have to always keep a balance between readiness to fight a war and preparing for the future.

I don't think we had that balanced very well when we were buying all those aircraft in the late seventies, but now it is better. I think that is a good investment to make sure you are going to be able to properly use what you have.

It will now take until 1991 before we can grow to the 40 tactical fighter wings.

Senator Nunn. I will pose the same question to you I posed to Admiral Watkins and General Kelley yesterday.

If you were to assume—and I know this is not your direction and I know you will have to get direction either from Congress or from the Defense Department—if you were to assume that during the next 5 years that you were going to get approximately a 3-percent real growth from the Congress in the final analysis and if you assume further that you were going to fence off or make the top priority first the Strategic Nuclear Modernization Program, which has been done, as I understand in the past, and if you were going to fence off the strategic defense initiative, those two things assuming top priority, 3 percent growth, 5 years, top priority modernization, strategic nuclear, second SDI—what would this do to your conventional tactical capability in the Air Force over the next 5 years?

Secretary Orr. Basically, those are the assumptions. Actually, one of the Senators earlier asked about our growth. It is not to be 3 percent over the next few years. DOD will be higher, but the Air Force is scheduled for lower growth.

We have had our bigger growth in the past years. We have been making our plans on the basis of even less than 3 percent.

Senator Nunn. The overall will be 3 percent. You know within that the Air Force, whatever you are getting now, it is going to come down very significantly in order to absorb that.

I am suggesting to you that you probably should begin to put a pencil to it. I would like to get your rough reaction as to what that will do to the tactical side.

Secretary Orr. It probably would stretch it out, although may I say that we are starting to cancel programs rather than stretch them out.

I sent a letter to the chairmen of the committees yesterday canceling the low level laser guided bomb because it was costing too much.

I think you have seen publicity that Mr. Weinberger is asking us either to get the price of AMRAAM down or cancel it. Your presumptions are true. We are facing hard choices and one of them will have to be stop stretching programs out and cancel them.

Senator **Nunn**. On that point I will say I agree with you. I think if we keep stretching, we will find ourselves in a terrible situation in 4 or 5 years. We are going to be way, way off the mark. We are going to see the per unit cost go up.

The efficiency we hope to achieve in the production lines will not be there. I notice this year, although you are increasing production on four or five items, you are decreasing the production rate on about eight items, which means we are going to get less and less efficiency out of existing Air Force production lines overall.

Secretary **Orr**. In a few of those, and I will refer to the KC-135 modernization, there is what we call "a knee in the curve" where it rapidly starts to change. We are trying to get it to the point where the unit cost decreases.

There is no question as you stretch the program out, there is some escalation.

Senator **Nunn**. Could you furnish for the record an analysis of what is happening in this year's program stretchouts in terms of additional cost of programs you are stretching?

Secretary **Orr**. Yes, sir.

Senator **Nunn**. Thank you.

[The information follows:]

COST OF PROGRAM STRETCH

Fiscal constraints have forced reductions in the quantities of some weapon systems in this year's budget compared to what we had planned a year ago. For example, in the fiscal year 1985 President's budget request we had indicated we planned to buy 60 F-15 aircraft in fiscal year 1986. In this year's budget request for fiscal year 1986, we are requesting only 48 F-15 aircraft. When we eventually buy the remaining 12 F-15 aircraft in future years, they will cost us more due to price increases. Similar stretchouts were necessary in other programs as well, such as the F-16, KC-135R, Maverick, and GLCM. Reductions were also made to our modifications and spares programs. In total, the reduction to our procurement accounts was about $7.2B in fiscal year 1986 compared to what we had planned a year ago. It is impossible to determine the exact cost of stretchouts like these since we do not know when we will be able to add these quantities back into future budgets. As a minimum we will pay more due to increased inflation.

Chairman **Goldwater**. Senator Warner.

Senator **Warner**. Thank you, Mr. Chairman.

AIR FORCE BUDGET LEANS TOWARD TACTICAL OVER STRATEGIC

Mr. Chairman, I refer members to the booklet before us this morning, page 3, and the chart that shows that the strategic portion of your budget is beginning to tail off. It appears to be in favor of increase in tactical.

Mr. Chairman, I join with you in welcoming the distinguished Secretary and Chief of Staff. We should also note that Secretary Orr is crossing the 4-year mark.

Secretary **Orr**. Thank you.

Senator **Warner**. I think it is the first time in my memory that all four Service Secretaries have completed 4 years, an indication that they will go on together as a team. I think that speaks well for the President, the Secretary of Defense and individually the three

Service Secretaries and their dedication to the country and to the national defense.

Secretary ORR. Thank you, Senator.

Senator WARNER. Indeed, Secretary Orr, you were the distinguished Chief that provided the leadership that I am sure resulted in the strong retention rate in the Department of the Air Force. Money, benefits, and so forth, contributed to that, but leadership has played a strong role in that retention.

Senator Nunn and I and other Members of the committee engaged this morning in briefings on the forthcoming talks in Geneva. In that context a good deal of the briefing was devoted to the SDI and the importance of that program to the arms control process.

It occurred to me that I would like to have in the record this morning the observation of both the Secretary and the Chief with respect to the collateral benefit, particularly to the Department of the Air Force, of much of the research being done in SDI.

In other words, focus on SDI and look at it in the context of the proposal set forth by the President.

We should also be aware that here there will be some direct substantial benefit to the Department of the Air Force now and in the foreseeable future with respect to other programs which are not directly related to SDI.

Am I correct?

Secretary ORR. I made the inquiry in preparation for these meetings about how we were faring under SDI. You know it started under an umbrella program. It took some things away from us and other services.

The answer was very pleasing. The answer was that our programs are faring just as well under SDI as they would fare under us. Possibly one or two of them may have been expedited over what we might have been able to afford.

You asked for corollary programs.

Senator WARNER. Corollary benefits to the Department of the Air Force.

General GABRIEL. There are a lot of spinoffs. There are spinoffs between atmospheric defense and space defense. The same kind of things you have to detect, identify, point, track, and other things, to include, of course, the antisatellite role, there is a very definite connection there.

The kinetic energy and directed energy and all the other things we were looking at in R&D will help us a great deal in the technology from SDI research.

SILOS

Senator WARNER. Turning to the question of the silos, I think other Members have raised it, but I want to be somewhat more narrow in my question.

What is the current status of super hard silo research?

General GABRIEL. We are getting surprisingly good results from those tests in areas that we had not figured we would. You can super harden silos—the numbers I will supply for you—up to very, very high psi overpressures.

[The information follows:]

SUPER HARD SILO

The Air Force/Defense Nuclear Agency Superhard Silo technology program, started in fiscal year 1984, is about half way complete. Large-scale structural testing was initiated in mid-1984 with the testing of a subsize structure (1/5 size Peacekeeper and 1/3 size for the Small ICBM) to [deleted] with essentially no damage and subsequent retest to [deleted] with only slight damage. Over the next several months we plan to test and retest a structure of similar design at 1/2 scale Peacekeeper and a near full scale for the Small ICBM. Additionally, we plan to test structural designs of enhanced hardness [deleted].

General **Gabriel**. At the same time you have to consider not just the cost, but also the threat, how soon will Soviet ICBM accuracy be to the point where super hardening won't make that much difference. But, we are getting good results.

Senator **Warner**. Do these results pose any alternative basing mode for the MX before the planned completion of deployment in the existing silos?

General **Gabriel**. No. We are going to complete beddown in the Minuteman holes. It has potential for the future.

ADVANCED CRUISE MISSILES

Senator **Warner**. The next subject is cruise missiles.

Can you supply in the open record some knowledge on the advanced cruise missile, the rationale for this missile and your assessment of its long-term effectiveness in the face of the Soviet defensive improvement?

Secretary **Orr**. The rationale was twofold.

One was to create a more stealthy missile.

The second was to get increased range.

I have been witness to the operation, and we're currently almost on target in both aspects.

Senator **Warner**. To what extent might that program be impacting on the improved effectiveness of Soviet air defense?

Secretary **Orr**. Of course, the whole thrust of Stealth is to get through certain fire control radars, not search radars, but fire control radars. To the extent it is satisfactory, it will increase their problem.

BOMBER PROGRAM

Senator **Warner**. General Gabriel, turning to the bomber program, at the time it was the decision of the President and the Congress to resume the B–1 production, albeit in the new model B–1B, there were extensive studies performed by the Department of the Air Force.

Now the question is: Have these studies been updated to reflect changes since that initial set of studies, those changes being cost estimates, research on ATB, advanced cruise missile programs?

In other words, what is the status of the original rationale for the 100-bomber program versus what is spent by way of new knowledge in that period of time?

Have you updated the studies?

General **Gabriel**. Yes, we have. We have analyses of what the B–1B can do for us and what it might accomplish against the threat.

We do this for a number of reasons, not just to compare the systems.

We have a two-bomber program, ATB and the B-1B. We look at how to maximize the two-bomber program against the threat we expect, what are the weaknesses and what should we concentrate on in putting defensive systems on board to improve penetration.

Senator WARNER. More specifically to the force structure, you have the 100 announced in the B-1B. The number in ATB is classified.

Have these new studies indicated to you any basis for changing that force structure?

General GABRIEL. No. Right now the two-bomber program is the best approach. The studies, of course, have not gotten into trade offs like that. We have not encouraged that sort of thing.

We do need a new bomber beyond the B-1B.

Senator WARNER. I don't question that in the least. I was trying to get the numbers in mind, whether or not the mix between the B-1B and the classified number of ATB's has been impacted by the new information?

General GABRIEL. No, it has not.

CONTINENTAL AIR DEFENSE SYSTEM

Senator WARNER. Turning now to the continental air defense system, in view of what appears to be an increased Soviet emphasis on air-breathing systems, are you beginning to focus more attention, not individually, but the Department, on the need to bolster your air defenses?

General GABRIEL. We certainly are. When you look at SDI, assuming you get a perfect SDI, it will not take care of the cruise missile threat. That is a very severe problem.

You would have to have a tremendous, resource intensive system out there if all you have are AWACS and F-16's to counter cruise missiles. It takes a combination of the Navy tracking the platforms, the submarines and the surface vessels that might have these cruise missiles onboard as well as NORAD tracking the bombers as they approach. Destroying the platforms before they launch cruise missiles is preferred.

So, there are some systems that we have that, along with SDI will help us a great deal in finding those platforms.

Senator WARNER. Have you given some increased priority to the continental air defense?

General GABRIEL. Yes, we have.

Senator WARNER. I see my time is up.

Secretary ORR. Let me answer that last question, partly in terms of upgrading our Reserve and Guard squadrons that handle air defense in the United States. They are getting F-16's; they will start getting F-15's. We and the Canadians are upgrading our north warning capability.

Chairman GOLDWATER. General, can the MX meet scheduled initial operational availability in 1986?

General GABRIEL. Yes.

Chairman GOLDWATER. Can you accelerate that date?

General GABRIEL. With a strain.

Chairman GOLDWATER. Is that on the entire 100?

General GABRIEL. That is with the first 10 missiles.

Chairman GOLDWATER. How long would it take you to complete the 100?

General GABRIEL. The 100, right now, late 1989 or early 1990, full operational capability of the 100.

PROCUREMENT OF EXPENDABLE LAUNCH VEHICLES

Chairman GOLDWATER. General, can you address the priority that the Air Force and the Department of Defense attach to the procurement of expendable launch vehicles to complement the launch capability of the shuttle?

General GABRIEL. Yes. That came up last year when the urgency of it was emphasized because we had the need for a quick launch to put in orbit a very special satellite.

If we are going to be tied to a single thread, the space shuttle, we are concerned operationally that we are not going to be able to do things the way we want to do them in a timely way. We can't depend on single thread access to space.

We need a backup to do the things we know we are going to be required to do on occasion, that we can't program for in advance.

IFF SYSTEM

Chairman GOLDWATER. There is a possibility that the answer to this question might be classified. We are very interested in the progress that is being made on the improvement in communications between the services. I am talking about aircraft, ground and sea.

We are told that the common IFF is on hold. Is that true?

General GABRIEL. Not by our service. Essentially IFF, the MK-15, if that is the thrust of the question, is being held up right now by a German frequency problem which we hope to be able to resolve shortly.

As far as communications, the TDMA problem is associated with the Navy. The Navy is going to work a fix with us. I don't think we now have that problem. We have been told they will work it.

So, they will be able to handle TDMA and JTIDS.

Chairman GOLDWATER. Is the German problem with IFF a serious one?

General GABRIEL. It is serious in the sense it is holding up the whole alliance. I think it is probably the case that "the equipment is not built here." They have a system of their own and the frequency band might be a little better than the one we are using.

We have already spent a great deal of money and effort to get the British and French onboard with us and they are onboard now.

If we went the way the Germans want us to go, it would cost us several billion dollars more to do it. We can't afford it. We have many more platforms than they have or anybody else has. It will cost us more money.

We have an affordable program which is not quite as good technically as the Germans', but it is good enough and everybody can afford it and can step up to it. I hope the Germans will come onboard soon.

Chairman GOLDWATER. You don't see it right now as an insurmountable problem.

General GABRIEL. I don't see it as an insurmountable problem.

The Luftwaffe has been in a box, but they are really with us. The problem is at a higher level than that.

Chairman GOLDWATER. I would like to be kept posted on that.

General GABRIEL. Yes, sir.

Chairman GOLDWATER. This question does not relate to the hearing that we are holding, but it does relate to a piece of legislation that both sides have agreed on, but we have not heard from you yet.

I will ask the question. As you know, a resolution has been introduced in the Senate to authorize the President to advance Lt. Gen. Ira Eaker and Lieutenant General Doolittle to the grade of general on the retired list of the Air Force and that would be without any monetary benefits, pay or any change in the current law relative to reserve officers or regular officers.

Does the Air Force support the resolution?

Secretary ORR. I think both of us would support it with great enthusiasm.

Mr. Chairman, I might note, if the members didn't know it, Mrs. Eaker fell yesterday and broke her ankle and had to have it repaired with pins and plates yesterday morning. Both of them are in the hospital because he is unable to stay alone.

Chairman GOLDWATER. He has not been too well. That goes with four stars.

That is the only question on the subject.

Senator NUNN. On that latter point, I certainly will join with you in that bill. I think it is meritorious and overdue to two excellent officers who served the country with great distinction.

Chairman GOLDWATER. The second round of questions.

Senator Wilson.

Senator WILSON. Thank you, Mr. Chairman.

AIR FORCE/NAVY AGGRESSOR PROGRAM

General Gabriel, the Congress last year mandated a joint Air Force-Navy study on an aggressor program or adversary aircraft program. I understand the study is completed, but I have not received a copy of that.

I understand the recommendation was made that there was no need for a common aggressor aircraft. I don't understand it.

Why would we not anticipate that the Navy and the Air Force would be opposed, in the event of conflict, by the same aircraft, the same enemy aircraft?

Why doesn't it make sense to employ a common aggressor aircraft and wouldn't there be savings involved in doing so?

General GABRIEL. There could be savings and the threat, as you say, is essentially similar. We have our aggressor aircraft in place, as you know. The Navy is adding to theirs.

We think it is more important to now go from a Mig-21 simulator to a Mig-23 and beyond. It would be most cost effective for us. That is the reason we have gone the route to spend a few million dollars, twenty some I think, for our whole fleet to put radar onboard so that when you are in an engagement you don't get a sanctuary on the front quarter.

The aggressor will have essentially as good a radar as the actual threat has. With that small investment we can have a pretty good Mig-23 simulator. That is the reason we have chosen that course.

Senator WILSON. You are upgrading the F-5?

General GABRIEL. We are upgrading the F-5 with avionics.

Senator WILSON. The Navy has made a different decision. They held a competition and selected the F-16.

I must say, since I am concerned about cost, I should congratulate the Secretary of the Navy because there is almost a $2 million per copy discrepancy between the Navy and the Air Force contract on the F-16, even accounting for differences in weapons and my question is whether the Air Force is paying too much for its F-16's?

Secretary ORR. I would like to address that.

Senator WILSON. I thought you might.

Secretary ORR. Let me say that they did not buy the first F-16 that we are buying. My figures may differ from yours. I want to compliment the Navy. They got an outstanding buy, a very good buy.

When you consider we have buying power in the neighborhood of 150 a year and they were buying only 14, we buy our engines directly from General Electric and they had to take pass-through engines, all the other factors that really give us credit, we think we would have paid about $100,000 less for the same plane than they did.

When you are only buying 14 and you are measuring against our ability to buy 150 a year, that is a splendid buy on their part.

Senator WILSON. That is encouraging.

What accounts for the significant difference? $12 million is a lot of money, a $2 million discrepancy, even taking into account the differences in the aircraft.

Secretary ORR. We think that the difference is probably not quite $2 million.

Frankly, as we see it, and this is not our business, but a guesstimate as to what the manufacturer did, we think the manufacturer forewent profit.

Senator WILSON. What is the Air Force going to do about its own price on its F-16's in the future?

Secretary ORR. We think we have a good price. We don't think we are in the same position as the Navy. I think that was a deliberate effort by one manufacturer to keep another manufacturer out of the market.

Senator WILSON. Did the Air Force review the winning bid before it was submitted to the Navy?

Secretary ORR. To the best of my knowledge, we didn't.

Senator WILSON. I was advised that Air Force Systems Command had reviewed it.

Secretary ORR. It didn't come to my attention.

General GABRIEL. It was discussed with some of our people, but we didn't review it, to my knowledge. I did not.

Senator WILSON. Is that customary for one service to review the bid that is to be submitted to another?

General **Gabriel**. It might be useful. I don't think it is customary.

Senator **Nunn**. I would say it would be enormously encouraging if you did.

Secretary **Orr**. I don't think so. I don't think there are too many instances where somebody is buying the same product that another service is using and not doing it through a joint type of purchase.

MILITARY RETIREMENT SYSTEM

Senator **Wilson**. We have heard much about the military retirement system, in the past 2 days in particular. In the past you have indicated that you believe that the military retirement system can be reformed without adversely affecting national security and without breaking Congress' earlier commitment to our military personnel.

Would you care to give us your views on this issue?

Secretary **Orr**. I am not sure I even understand the question.

Could you repeat it?

Senator **Wilson**. I am under the impression that in the past you have indicated that you thought the military retirement system could be reformed.

Secretary **Orr**. No, indeed. I have never spoken of reforming the military retirement system. I have been defending the one we have.

Senator **Wilson**. I am sorry that there seems to be a failure of communication.

I was told that you had satisfied yourself it could be reformed without adversely affecting security interests.

Secretary **Orr**. No. On the contrary, I think the retirement system, and I am not speaking about four stars or three stars, the place that the retirement system serves us best is with the 8-year enlisted person.

At the moment, at 8 years they can look to 20 and say "it is worth staying; I can see something if I stay another 12 years."

If the retirement was put out to age 62—these young people are only 26 or maybe 28 when they have 8 years in, they came in at 18 or 20—if they are 26 or 28 and they are looking at retirement somewhere around the age of 60, that is not going to hold them with us.

They are the people we want to hold. They are very valuable. They are the Boeings and Martin-Mariettas of the world. They know electronics, avionics, engine overhauling.

I have not spoken out in favor of reforming the system.

Senator **Wilson**. Thank you.

Thank you, Mr. Chairman.

Chairman **Goldwater**. Do you have any further questions?

MX

Senator **Warner**. Mr. Chairman, if we could take a minute on the subject of the MX. Have the witnesses been given sufficient opportunity to reply to the issue of the implication of a failure to pass by the Congress the resolution of approval for release of the fiscal year 1985 MX funding?

Secretary **Orr**. That direct question has not been asked.

Senator **Warner**. I wonder if I might pose it now and you can touch on it at this time and elaborate further for the record.

Secretary **Orr**. I will start.

The original date of a vote in April was in part engendered by our statements, I believe, that we could continue production through March, but after that length of time the line would go down and momentum would be down.

It is not a matter of the line, but the personnel who operate it. The delay would be serious with us.

General **Gabriel**. Delay would connect it to the 1986 budget. It would kill off the whole thing at that time.

Senator **Warner**. You have really reached a sheer point in 1985 with respect to the MX and that line would abruptly stop and, as a result, as the secretary pointed out, traditionally in industry they would lose a lot of skilled people.

Secretary **Orr**. Yes.

MINUTEMAN III

Senator **Warner**. General Gabriel, there is a news release now on the information concerning the Minuteman III destroyed in the testing mode.

Could you amplify?

General **Gabriel**. That is true. As you know, we conduct routine operational testing out of Vandenberg AFB. Not long after launch, the missile was destroyed. We don't have a good look at it yet. We do these tests in order to test reliability and accuracy.

Senator **Warner**. Generally speaking, when we look at that apparent failure in the context of the overall test program, what is the frequency with which you do testing and what has been the rule of the previous tests of that missile?

General **Gabriel**. We test about seven a year. The reliability has shown that what we are doing is helping somewhat to maintain it. Of course, this one didn't work.

Senator **Warner**. If you test seven a year, have the previous five or six tests been successful?

Secretary **Orr**. I wouldn't want to go out on the limb on how many. My impression is that it has been very successful. I don't think we have had a failure.

General **Gabriel**. The Minuteman has been very reliable so far.

Senator **Warner**. I think we should have in the record the significance of this failure in the context of the history of this testing.

General **Gabriel**. We will do that.

[The information follows:]

MINUTEMAN III TESTS SHOTS

Minuteman III operational testing has been conducted since 1971. Objectives of the testing program are to assess system accuracy and reliability, identify potential system deficiencies, and verify corrections to past deficiencies. Flight tests, such as the one conducted on 6 February 1985, provide a complete end-to-end demonstration of missile system from emplacement in the launcher to reentry vehicle impact. The Air Force has test launched 106 Minuteman III missiles over the past 14 years with only six failures. In two cases, the failure led to identification of a potential force-wide deficiency, which was then fixed prior to significant deterioration of system reliability. The other failures have been random in nature and of the type which can be expected in a comprehensive test program.

Chairman **Goldwater**. Senator Nunn.

Senator **Nunn**. Thank you, Mr. Chairman.

Yesterday we had Secretary Lehman make a statement that gave some hint of neglect in the past by perhaps his predecessor in office relating to the Navy. Senator Warner immediately and understandably took umbrage at that and explained somewhat the context of the earlier period in the seventies.

STRATEGIC NUCLEAR IMBALANCE

There is no former secretary of the Air Force here. I quote from your statement:

"Last year we made considerable progress toward redressing the serious strategic nuclear imbalance that resulted from almost two decades of neglect"—that is two decades—that goes back quite a while. It covers both Republicans and Democrats and may be correct.

Can you tell us when these systems were started?

Secretary Weinberger made a statement last year that was not corrected for the record. I questioned him and never got an answer, but he stuck to his position.

When was the MX started?

[The information follows:]

MX START

Discussions on the need for a follow-up ICBM to Minuteman III began in the 1960s. A formal requirement by the Strategic Air Command for a new missile and survivable basing mode was validated in 1972. The MX development program began in 1974 with concept definition and $6M was provided by the Department of Defense Appropriation Act, 1974, for Advanced ICBM Technology.

Secretary **Orr**. I don't know. I came in and they had already in 1981 been looking at 32 different basing modes because that was the time, you remember, we were racing around the desert in open and shut holes.

Senator **Nunn**. The Air Force at that time had agreed on a basing mode?

Secretary **Orr**. Yes.

Senator **Nunn**. When did the MX program start?

Secretary **Orr**. 1972 or 1973.

Senator **Nunn**. Mr. Secretary, if you need help on this, I will be glad to get General Gabriel's answer.

When did the ALCM cruise missile start?

General **Gabriel**. The program itself is about 7 or 8 years old, at least.

Senator **Nunn**. What about the advanced cruise missile?

General **Gabriel**. Probably 4 years ago.

Senator **Nunn**. I thought that started with Bill Perry?

General **Gabriel**. He probably had the idea.

Senator **Nunn**. He pushed it very, very hard and very successfully in the late 1970's.

How about the KC-10?

General **Gabriel**. There again, probably 5 years ago.

Secretary ORR. I believe the first KC-10 was bought in 1981 when I was Secretary, Senator.

Senator NUNN. When was it started? It started 10 years ago?

Secretary ORR. That is possible. None was bought.

Senator NUNN. What about the re-engined KC-135?

Secretary ORR. That predates my time. They were being re-engined when I came in.

Senator NUNN. General.

General GABRIEL. I can't say, but it does pre-date it.

Senator NUNN. How about the advanced technology bomber?

Secretary ORR. I was source selection on it.

Senator NUNN. When was it started?

Secretary ORR. Start of source selection? You mean the idea?

Senator NUNN. Somebody started it.

Secretary ORR. When were the RFP's put out?

Senator NUNN. Pretty well along. High priority had been given to it in previous administrations, had it not?

Secretary ORR. I don't know.

Senator NUNN. This is a pretty categorical statement when you say two decades of neglect. Maybe you can pin these things down.

Secretary ORR. When you look at the funding and deployment of a Minuteman in 1962 and still not in the next generation and the Soviets have done three different generations——

Senator NUNN. How many MX's have we deployed?

Secretary ORR. We still haven't deployed.

Senator NUNN. How many B-1's?

Secretary ORR. One. We have rolled out one.

Senator NUNN. The point is that these things take a long time. American defense posture requires continuity. It seems to me you don't further that cause or the cause of bipartisanship when you make these kinds of sweeping statements.

That is the point I wanted to make.

When was the B-1 reinstituted?

Secretary ORR. After I came aboard.

Senator NUNN. I agree with you on that latter one.

Thank you.

Chairman GOLDWATER. The MX was started under the Ford administration and the KC-10 was considered as a tanker and as soon as it was considered as a transport aircraft. I don't know who was President, but the President has to quit making these speeches.

Senator WARNER. I can remember MX, the initial study started under President Johnson.

Chairman GOLDWATER. Under President Ford.

We will research it.

Senator WILSON. I do have questions I would like to state and ask that answers be provided for the record.

First, General Gabriel, would you state whether or not you think that the 33,000-pound limit posed by Congress on the Congressman missile, small mobile missile, is a prudent limitation, and if not, why not?

Second, would you state the reasons for your preference for MX as opposed to Minuteman III?

Third, would you compare the costs, both of investment and the ongoing operation of 100 MX and 1,000 Congressman missiles.

General GABRIEL. Would you like me to answer for the record?

Senator WILSON. I would be glad to have you answer now if we have the time.

General GABRIEL. The first one, 33,000 pounds, whether or not it is a constraint, it is going to be harder for us to do. I think it is prudent in the sense that mobility is one of the things we have to take into account as an operational concept.

So, 33,000 pounds, I am told by my technical people, can be done. It will just be a little harder to do.

Senator WILSON. Let me share with you that having talked to several of the contractors who are involved, they think it is imprudent. They think it is an unreasonable restraint and they can achieve mobility without that constraint.

General GABRIEL. The MX will give us 700 more warheads, one-for-one replacement. The MX right now has a much better accuracy. It will be worth a lot more than just those extra 700 warheads.

Minuteman III today will not hold the SS-18's and SS-19's at serious risk. I think that is known and, therefore, the deterrence is not as good as it should be.

The MX will obviously put that pressure on them.

Senator WILSON. The extra 700 warheads give you a lever in arms control negotiations that you don't have otherwise?

General GABRIEL. Yes. As I told you earlier, I thought that was one of the primary reasons they wanted to come back to the table because they do fear the MX.

Senator WILSON. The third question was to compare the costs, both of investment and of ongoing operation of 100 MX's and 1,000 of the small mobile missiles.

General GABRIEL. It is obviously going to cost more when you have 1,000 missiles out there compared to 100.

Senator WILSON. A lot more?

General GABRIEL. It will be a lot more.

Senator WILSON. There is no way you can possibly do this now, but I will ask that you provide for the record the best computation you can come up with on that cost comparison.

Thank you, Mr. Chairman.

[The information follows:]

COST COMPARISON 100 MX VERSUS 1,000 ICBM

The Small ICBM program is just completing the concept development phase of acquisition and is about to begin a two year pre-Full Scale Development (FSD) program. The Air Force will select the optimum design for the three stage booster; the most cost effective, accurate, and responsive guidance system; and the most survivable, yet fiscally feasible basing mode. During this selection process, we will also identify the force structure and determine the most efficient production schedule. It is not possible to provide a cost estimate for a force of 1,000 SICBM missiles before these assessments are complete.

Chairman GOLDWATER. I want to thank both of you gentlemen for being here today. It is always a pleasure to have you and hear your good words.

The committee will convene as in executive session. We have had a quorum here. We have agreement on both sides to pass the resolution relating to the promotions of Lieutenant General Doolittle and Lieutenant General Eaker to general.

We have the agreement of the Air Force. We have agreement of both sides. So, without objection, it is passed. It will be reported to the floor and I ask unanimous consent that I might incorporate a statement on that subject, and, Senator Nunn, if you would care to incorporate a statement, please do so.

[Questions submitted for the hearing record follow:]

Questions Submitted by Senator John Warner

INTEROPERABLE COMMUNICATIONS

Senator **Warner**. Mr. Secretary, as you have probably heard, there is a strong interest in this committee on the interoperability of communications among our services as well as with our allies.

Are the new systems that you are procuring interoperable both among our own services and with our NATO allies?

Are there any problems now with the TRI-TAC system between the Army and the Air Force?

Secretary **Orr**. The Air Force is making every attempt to procure communications systems that are interoperable with other services and our NATO allies. We know that effective command and control will only be possible if we are successful in this area. Both the Army and the Air Force are purchasing a large amount of TRI-TAC equipment. Although we have different requirements for certain elements of the TRI-TAC system, we anticipate no problem with interoperability.

TACTICAL COMMUNICATIONS SATELLITES

Senator **Warner**. On contingency missions, will the Air Force and the Army have any problems communicating via their tactical communications satellites?

General **Gabriel**. No. Full interoperability exists today and will in the future on tactical UHF satellite terminals. Further, point-to-point interoperability exists between current Tactical SHF Satellite Terminals.

OFFICER RETENTION

Senator **Warner**. It appears that the officer corps retention rate, particularly pilots, shows a downward trend.

In fact, your executive summary report shows the percentage of Military Airlift Command (MAC) pilots expected to stay through their eleventh year dropped from 79 percent in fiscal year 1983 to 66 percent in fiscal year 1984.

Could you describe what actions are being taken or need to be taken to provide incentives to encourage them to re-enlist?

Secretary **Orr** The retention problems of the late 1970s point out the importance of a stable benefits package. Many programs are designed to meet the need for career incentives. Given the competition we are seeing from the airline industry, preserving Aviation Career Incentive pay (ACIP) is critical. Our present request for a 3 percent pay raise in July 1985 for military members is needed to help hold our position in pay comparability. In the future, measures to narrow the comparability gap between military and private sector pay—now the largest since 1972—should be taken. The military retirement system, the services' number one career incentive, should be preserved. Families share in sacrifices members make during their careers. Programs such as expanding the Family Support Centers, increasing reimbursements for permanent change of station (PCS) costs, and providing dependent dental care improve quality of life and must be implemented.

Recognizing the role of leadership in retention, we are emphasizing to our commanders and supervisors how their actions and examples encourage good people to stay on board. Insight gained from extensive surveys and interviews with separating pilots is used to target new programs and educate our leaders on the needs of young pilots.

SOVIET ABM

Senator **Warner**. General Gabriel, is the Air Force concerned by the indications of the unilateral Soviet deployment of a territorial ABM defense—including one clear violation of the 1972 ABM Treaty?

General **Gabriel**. Yes. [Deleted.] The Air Force believes as the President does, that this is a serious matter and will bear close watching in the future.

SMALL ICBM

Senator **Warner**. Assuming an arms control regime, how does the small ICBM deployed in superhard silos compare with the same missile deployed on hard mobile launchers in terms of stability, and first strike incentives?

General **Gabriel**. Much would depend upon the specific arms control agreements and the specific threats we would face under those agreements. We believe that survivability and effectiveness of the Small ICBM in either basing mode, in conjunction with our other strategic force components, will contribute to far-term stability. We are presently testing and evaluating each of the promising basing modes to determine the most feasible operational deployment to support overall stability. The attacker should believe that he would not have a better force balance after a first strike than before. Our future ICBM force structure will contribute to this disincentive through the complementary elements of Peacekeeper and the Small ICBM. Peacekeeper will enhance deterrence and near-term stability by balancing the current Soviet advantages in ICBMs. The Small ICBM's single warhead and improved survivability will contribute to far-term stability by producing an exchange ratio unattractive to an attacker. This ratio will be dependent upon our success in meeting projected hardness levels for each mode, and in deploying mobile systems in operating areas sufficiently large to support survivability requirements. It is also dependent on the success of Soviet efforts to develop the military capability to attack the system.

MINUTEMAN II/III

Senator **Warner**. In the absence of any arms control constraints, would the Air Force opt for removing Minuteman II rather than Minuteman III in order to deploy the MX. Would you consider replacing MM IIs with the MM IIIs removed at F. E. Warren AFB.

General **Gabriel**. Even in the absence of arms control constraints we would continue with our current plan to replace Minuteman III missiles at F. E. Warren AFB with the Peacekeeper missile. Our selection of deployment location was limited to the three bases with Minuteman III silos capable of accommodating the Peacekeeper missiles without extensive and costly silo modifications. Those bases were F. E. Warren with 200, Grand Forks with 150, and Malmstrom with 50 silos. Since only 50 could be deployed at Malmstrom and our most capable Minuteman IIIs (those with MK-12A warheads) are located at Grand Forks, F. E. Warren was the most logical selection. Also the geology in the F. E. Warren area enhances the survivability of silo based ICBMs more than the other potential basing areas. These considerations out-weighed any other factors. In regards to the second part of your question—yes, we have considered replacing 50 Minuteman IIs with the Minuteman IIIs being replaced with Peacekeeper. However, this option has not been pursued since it would only exacerbate our problem of adhering to the SALT II MIRV limits. Should the current "no undercut" constraints be removed, we could reevaluate replacing MM IIs.

ACM

Senator **Warner**. General Gabriel, recognizing the classification problem, could you comment in general on the progress of the Advanced Cruise Missile (ACM) program?

General **Gabriel**. The Advanced Cruise Missile (ACM) program is progressing well. A competitive source selection for ACM was concluded in April 1983 with the Full Scale Development contract awarded to General Dynamics.

In terms of schedule, the ACM program is within two weeks of the original schedule started two years ago. The system is currently exceeding all threshold performance requirements.

The ACM total program cost has been baselined, similar to the B-1B program and all contracts are fixed price contracts. With continued support of the current acquisition schedule, we believe we will field a system that meets or exceeds our requirements, on schedule and within our projected budget.

FORCE MODERNIZATION PROGRAM

Senator **Warner**. General Gabriel, for the record, would you provide the bomber cost, effectiveness and force structure studies referred to in your answer to my question regarding changes that have occurred since the start of the modernization program?

General GABRIEL. The 1981 bomber decision was based on a number of efforts that were consolidated into the Joint OSD/Air Force Bomber Alternatives Study Final Report (U) published 2 October 1981. For the study, we examined roles, missions, and requirements; the global and theater threat; aircraft candidates; program schedules; and costs. We have routinely reviewed each of these areas as part of our yearly planning, programming and budgeting system. The results of these reviews come to you as the Air Force part of the President's budget each year. While we have not published a formal updated version of the 1981 study our reviews have consistently substantiated the original findings. For these reasons we are comfortable with and strongly support the Bomber Modernization Program as originally established in 1981.

QUESTIONS SUBMITTED BY SENATOR DAN QUAYLE

AIR FORCE VULNERABILITY TO WARSAW PACT TACTICAL MISSILES

Senator QUAYLE. Secretary Weinberger's Annual Report to Congress (page 56) notes that "Soviet doctrine stresses the use of conventionally armed ballistic missiles to initiate rapid and wide-ranging attacks on crucial NATO military assets throughout Europe." Are U.S. air bases in Europe and key U.S. Air Force assets in Europe vulnerable to this threat? Will this threat increase or decrease in the next five years and why?

General GABRIEL. [Deleted.]

Senator QUAYLE. A major effort is being undertaken to harden our U.S. Air Force bases in Europe and key NATO Air Force assets by constructing concrete airplane revetments and storage bunkers. How effective would these passive defenses be against conventionally armed SS-21, SS-22, and SS-23 attacks?

How effective would they be against nuclear variants of these missiles and the SS-20?

How effective would they be against a chemical or biological attack waged with ballistic missiles?

Secretary ORR. The Air Force Weapons Laboratory has conducted blast testing on portable concrete revetment structures and semi-buried concrete storage bunkers. [Deleted.] Based upon the blast testing results mentioned earlier, the revetment walls and storage bunkers will provide excellent protection if the submunitions/mines fall on or outside these structures. However, submunitions falling within revetment structures would destroy or severely damage protected equipment. Therefore, the Air Force disperses revetment structures wherever possible to reduce the probability that submunitions will land inside revetment structures.

The portable concrete revetments and storage bunkers are not designed to withstand tactical nuclear explosion blast effects. They are designed to provide minimal protection from conventional weapon effects and to provide a low cost alternative to semi-hardened/hardened construction. However, a double-walled revetment structure survived a 10,000-pound TNT-equivalent explosion from 108 feet away.

The storage bunkers would protect equipment stored inside from direct contact of any liquid agent dispensed from tactical ballistic missiles. However, if a persistent toxic agent is used, then a vapor hazard may result inside the bunker should contaminated personnel carry liquid agent inside. This vapor hazard will not harm the equipment, but it would require personnel entering the bunker to keep protective masks on until the interior is vapor free. Since revetment structures are open at the top, liquid agents may drop on exposed equipment. However, as part of the Air Force concept of operations in a chemical warfare environment, critical parts of exposed equipment are covered to reduce direct liquid agent contamination.

Senator QUAYLE. Beyond efforts to improve existing air defense systems, what is the Air Force doing to develop active theater ballistic missile defenses?

General GABRIEL. The Air Force is not currently funding any work in active theater ballistic missile defense. As part of the Strategic Defense Initiative, the Air Force is conducting research and developing technologies in surveillance and kinetic and directed energy weapons which may have applicability to theater ballistic missile defense.

Senator QUAYLE. Which service now has responsibility for defending our main operating bases and other key military installations in Europe?

Secretary ORR. Under the terms of the Army-Air Force Memorandum of Agreement on Force Development dated May 22, 1984, the Army is responsible for providing ground-based point air defenses and off-base ground defense at US military installations. The Air Force is responsible for providing ground defenses within the base perimeter and for providing passive defenses (e.g., aircraft shelters, redundant launch and recovery surfaces).

AIR FORCE PROCUREMENT OF ADVANCED OR PREFERRED MUNITIONS

Senator QUAYLE. In this year's JCS Military Posture Statement ammunition shortfalls are identified as the "critical issues in material sustainability" and as the "most significant constraint" on our commanders' combat capabilities. Specific mention here is made to preferred or modern munitions ("This constraint applies particularly to the more modern munitions, which provide increased fire-power with reduced delivery system vulnerability"). Under current budget constraints the number of weapons we can buy is restricted. Given the increased Soviet anti-airwar capability, isn't the need to make our planes as effective and as survivable in conflict as possible by providing them with effective modern stand-off weapons a top Air Force priority.

General GABRIEL. Yes. We are asking for approximately $2.3B in the fiscal year 1986 budget to procure modern air-to-surface munitions. Almost $1B, of this total is for modern stand-off munitions. Our plans call for the use of stand-off weapons like AGM-130 and GBU-15 early in a conflict to increase survivability and then transition to lower cost, direct attack weapons after defenses are drawn down.

Senator QUAYLE. In October of 1984 Armed Forces Journal International published a chart from a May 1984 DOD study, "Improvements in U.S. Warfighting Capability," which indicated that at the end of fiscal year 1986 the Air Force was expected to have procured only 35 percent of the preferred munitions DOD defense guidance requires and that by fiscal year 1990 it still would have only achieved approximately 60 percent of this objective. Why are these figures so low and what, if anything, does the Air Force intend to do about it?

Secretary ORR. The first point I want to make is that the Armed Forces Journal article was inaccurate. It was based on an interim analysis and inaccurately interpreted. Based on the [deleted] Defense Guidance objective, we will be able to support [deleted] of the required sorties by the end of fiscal year 1986 with optimum munition loads. This capability will increase to [deleted] by fiscal year 1990.

Additionally, these figures relate to preferred munitions only. The Air Force can support 100 percent of the required sorties when alternate munitions are considered. The Air Force is continuing an aggressive munitions procurement program which currently has almost [deleted] programmed in the Fiscal Year 1986-90 Five Year Defense Plan.

Senator QUAYLE. In 1979 the Air Force issued a requirement for weapons with increased capabilities against hardened air based facilities. What new airfield attack weapons has the Air Force produced since then to fulfill this requirement? Do any of them allow the pilot to fire the munition well before he might encounter active air defenses and to immediately fly away from the target region?

General GABRIEL. Since 1979 the Air Force has investigated several weapons to meet requirements for increased capability against hardened air base facilities. These facilities cover a wide variety of hardened targets from POL storage sites to very hard command and control bunkers. No single conventional weapon has been found to be effective against all targets. Our primary effort to destroy hard targets has been the Improved 2000 pound (I-2000) Warhead, a penetrating warhead to replace the MK-84 bomb. The I-2000 Full Scale Development program, which begins in fiscal year 1985, will upgrade the I-2000 with improved fuzing and advanced guidance kits for better accuracy and improved standoff. The capability to deliver I-2000 from aircraft other than the F-4E will also be expanded.

Another hardened target penetrator being developed is the Boosted Kinetic Energy Penetrator (BKEP) submunition. Although BKEP is being developed primarily to attack runway and taxiway surfaces, it can be effectively used to destroy other hardened airbase facilities such as aircraft shelters. BKEP can be used in a variety **of carrier vehicles such as the Tactical Munitions Dispenser for overflight, the AGM-130, boosted GBU-15, for short range standoff, and Tactical Missile System for long range standoff. The Air Force requires a mix of airfield attack weapons for various operational scenarios under different levels of defenses. The I-2000 and BKEP in various carrier platforms will provide that mix for most hardened targets.**

Senator QUAYLE. Since 1979 how significantly have Warsaw Pact passive and active defenses of its anti-air assets and key air base facilities increased?

Secretary ORR. In passive defense, the Soviet program to build hardened aircraft shelters in the area facing NATO [deleted]. Future Soviet shelter activities [deleted] as necessary to house the bigger new generation fighters. The other Warsaw Pact sheltering programs continue at a moderate pace with about [deleted]. In addition, [deleted].

The Soviets and Warsaw Pact also stress the importance of camouflage, concealment and deception. They employ natural and artificial camouflage techniques and have [deleted].

The Soviets have continued to upgrade their active defenses. Their air-to-air fighter force will experience a major improvement with the deployment of the FULCRUM [deleted] and the FLANKER [deleted]. These aircraft will be available in significant numbers by the end of this decade.

Soviet and Warsaw Pact surface-to-air defenses are also being improved. A new radar equipped AAA weapon to replace the ZSU-23-4 is being tested and will be used to defend air bases. The SA-10, a new strategic SAM which will eventually replace the SA-2 and SA-3, [deleted].

Senator QUAYLE. When does the Air Force plan to update its 1979 statement of need for airfield attack weapons?

General GABRIEL. We expect a new airfield attack statement of need to be validated in the Feb-Mar 1986 timeframe.

Senator QUAYLE. In real dollars what has the Air Force been spending in the last five fiscal years; (1) for procuring preferred munitions, (2) for developing them, and (3) for procuring aircraft dedicated to attacking enemy air bases and key military installations and (4) developing such aircraft.

General GABRIEL. From fiscal year 1981 through fiscal year 1985 the Air Force has spent/proposed to spend $6.9B for preferred WRM munitions and since Fiscal Year 1981 we have spent approximately $1.88B on conventional munitions RDT&E. There are no specific aircraft types or models solely dedicated to attacking enemy air bases and key military installations. When considered in the broad context of interdiction, all Tactical Air Force fighter/attack aircraft have (to varying degrees) this capability. The A-10 and F-15C/D, however, have only a limited ability for airfield attack due to the nature of the mission for which they are designed.

Senator QUAYLE. Does the Air Force have a requirement to develop a long-range conventional cruise missiles (i.e., air-launched conventional cruise missile with ranges exceeding that of the Navy's (TLAM-C)? If not, why not? If so, what is the expected IOC?

General GABRIEL. The Air Force is currently developing a long-range cruise missile with a 600 km or less range. This missile will meet our operational requirements and remain within existing arms control agreements.

SATELLITE SYSTEM VULNERABILITIES AND SPACE MINES

Senator QUAYLE. The Soviets recently demonstrated their capability to maneuver Cosmos 1604. Could this capability be employed by the Soviets to develop a space mine that could approach and later destroy some of our military satellites?

Secretary ORR. You are probably referring to Cosmos 1603, which received much attention in the press recently because of the unusual maneuvers the launch vehicle performed to put the satellite into its final orbit. The capability to maneuver satellites is not unusual—the USSR and the U.S. have had this ability for years. Although this maneuvering function is one characteristic necessary to develop a space mine, [deleted].

Senator QUAYLE. Currently we are hardening our satellites against EMP and nuclear effects at some expense. We also are looking into making our satellites more maneuverable. There also is some talk about developing active satellite defenses. How would any of these passive and active satellite defense efforts be able to cope with the threat posed by a space mine if we allowed the Soviets to position such mine very close to our military satellites?

General GABRIEL. If the Soviets deployed a space mine weapon, and if they could covertly position the weapon close to our satellites, we could [deleted]. Neither of the two hypothetical conditions posed in the question, however, are applicable to today's military space posture. First, [deleted]. The station keeping problems to keep a mine within lethal range of its intended target are technically difficult and the required maneuvering of the mine would be readily observable. Evidence of such maneuvering would be easily recognizable as characteristics of a likely space mine threat. [Deleted.] Second, the U.S. tracks both active and inactive Soviet space systems and, if a dangerously close approach is detected, we [deleted.]

Senator QUAYLE. Could establishment of rules of the road in space creating keep out zones be of any help in coping with the near-term space mine threat? Is US policy to keep potential Soviet space mines away from our key military satellites?

Secretary ORR. [Deleted.] The Outer Space Treaty provides a general obligation for parties to "conduct all their activities in outer space with due regard to the corresponding interest of all other stated parties." If one party believes that activities planned in space by another party would cause damage to a satellite, it could request consultations. [Deleted.]

Senator QUAYLE. Do we have the ability to clear potential Soviet space mines away from our key military satellites?

General GABRIEL. [Deleted.]

Senator QUAYLE. In a recent Aerospace Daily it was reported that the Air Force showed no interest in an industry offer to develop US space mines. Is this report true? If so, why, particularly in light of the Air Force's keen interest in developing ASATs?

Secretary ORR. The Air Force presently has no interest in developing space mines. The type of mine alluded to in the Feb. 4, 1985 issue of Aerospace Daily is a nonnuclear munition that must be fired from very close proximity to its intended target. There are a number of reasons why the Air Force is not pursuing such space mines. Some of the principal drawbacks are the amount of propulsion capability and day-to-day ground controller effort required to keep a mine near its potential target, the risk of international repercussions from an inadvertent collision with the nearby target; and international reaction to threatening visibly another nation's satellites over long periods of time.

Senator QUAYLE. It is my understanding that our DSP satellite system employs mobile ground stations to improve the system's invulnerability. How survivable are our GPS ground stations? Are they mobile? What about the ground stations for our other military satellite systems?

General GABRIEL. Defense Support Program (DSP) satellites collect raw data which currently require data processing, on the ground, to derive usable mission information which is then distributed to users. To protect this mission data processing capability, the Air Force is procuring six Mobile Ground Terminals. Global Positioning System (GPS) satellites and the communications satellites, however, transmit information that is directly usable by the forces with no intermediate ground processing required. The GPS ground stations are used to keep track of, and update, the precise location of each of the GPS satellites. These GPS ground facilities are fixed sites, but retain a measure of survivability through proliferation. In addition, loss of these GPS sites, unlike the case with DSP, does not result in immediate cessation of the GPS function. CPS satellites support two missions; navigation and nuclear detonation (NUDET) detection. Loss of navigation updates from damaged GPS ground stations would result in a gradual degradation of navigation accuracy from 16 meters for the undegraded system to approximately 200 meters after 14 days. We are currently evaluating minor modifications to the satellites to extend this autonomous degraded mode to 180 days. GPS satellites operating in support of the NUDET detection mission for up to 180 days in a warfare environment without any ground station support.

The Defense Satellite Communications System, the Air Force Satellite Communications system, and the Milstar communications systems each have a combination of fixed and mobile ground stations for managing communications traffic and for maintaining the configuration and health of the satellites. The Defense Meterological Support Program (DMSP) has a combination of fixed and mobile sites for data readouts, but only fixed sites for satellite tracking and commanding. Like GPS, the DMSP satellites are being upgraded to operate during a trans-attack period without ground station support.

MISSILE ACCURACY WORK

Senator QUAYLE. Last year in answer to a question concerning the possible development of a terminal fixing guidance system for MX, the Air Force staff answered that such terminal guidance was not being developed for MX. The reason given was that such guidance was only being developed as "a hedge against possible future Soviet ABM systems or further Soviet hardening of critical targets which might negate the effectiveness of purely ballistic systems." Hasn't the Air Force's projection of the Soviet threat this year emphasized the emergence of such ABM capabilities and of such hardening? Does the Air Force have no requirement for terminal fixing systems for follow-on missiles to the MX?

Last year top Air Force officials repeatedly testified that it was hesitant to deploy a MARV because it might be "a little genie about to get out of the jug", an escape that we might come to regret. A top Air Force official also testified that the Air Force would only deploy a MARV if there was "a complete and total breakdown in our arms control efforts." In recent history has there ever been such a breakdown? What would constitute such a breakdown in the future? Are there no other conditions under which the deployment of a MARV system would be prudent. What might these be?

Secretary ORR. There have been periods of unproductive or limited progress in strategic arms negotiations; however, these periods were usually followed by substantive negotiation progress. It would be inappropriate to attempt to forecast events or conditions that would constitute a future breakdown.

We do not believe that manuevering reentry vehicles (MARVs) are required in the near-term. Threat projections include an [deleted].

With the excellent Peacekeeper accuracies attained during its flight test program and the ongoing Advanced Strategic Missile Systems (ASMS) penetration aid development effort, the [deleted]. However, continued basic research on MARVs is a prudent hedge against far-term Soviet ground based ABM capabilities or improvements in Soviet target hardening. [Deleted.] Within ASMS, the Air Force is evaluating basic MARV technologies to preserve this hedge and reduce potential development lead times. However, a decision to deploy MARVs on any ICBM system should be a National one, based on the Soviet far-term threat.

QUESTIONS SUBMITTED BY SENATOR SAM NUNN

SUPPORT FOR THE B-1 AND ATB

Senator NUNN. Secretary Orr and General Gabriel, are you both still fully supportive of the two-bomber program, including the completion of the B-1 program with this fiscal year's funds and the transition to the Advanced Technology Bomber (ATB) on its current (classified) schedule?

Secretary ORR. Yes. We fully support the President's strategic modernization program set in motion in 1981 which included quickly upgrading our air-breathing deterrent in the late 1980s with the 100 B-1Bs and developing the Advanced Technology Bomber (ATB) for deployment in the 1990s. We expect both aircraft to stress Soviet air defenses with their complementary penetration capabilities. The B-1B, for instance, features highly sophisticated defensive electronic countermeasures while the ATB exploits the latest in low observable technology. The B-1B is turning out to be one of the most successful acquisition programs undertaken recently by the Department of Defense. With strong Congressional support, we have moved well ahead of schedule and are staying within budget. The ATB is also progressing well. In other words, we are right on track with the President's Two-Bomber Program.

SRAM II WARHEADS

Senator NUNN. General Gabriel, in your discussion of the SRAM II program, you state (and I quote) "By using existing technology, we can make significant performance improvements without introducing unacceptable technical risk into the program." (end quote) General Gabriel do you plan to use the existing SRAM nuclear warheads on the SRAM II, or do you plan to have a new nuclear warhead designed for it?

General GABRIEL. We do not plan to use the present SRAM nuclear warhead on SRAM II because the warhead lacks the modern electrical and explosive safety features that are required for this type of system. We are conducting a Phase 2 Warhead Study that is examining both existing and new warhead candidates for technical feasibility for use with the SRAM II missile.

C-RATINGS SYSTEM REPLACEMENT

Senator NUNN. General Gabriel, you indicated a recognition of the need for a better system than the current C-ratings, and that the JCS "is committed to" providing such a system. Where are we in the development of this system, and when will it be introduced into the Air Force? Will it happen on your watch?

General GABRIEL. Yes, but developing such a system remains a very difficult task. The entire defense establishment continues to work on better ways to measure and express our overall military capability. Last spring, Secretary Weinberger directed formation of a task force to recommend improvements in the area of readiness analysis and reporting. This task force has representation from OSD, the Services, and the Joint Staff. Recognizing the need to address more than unit readiness, the task force is now exploring assessments in the areas of sustainability, force structure, and modernization. In the short run, I would not expect to see a system which reduces overall military capability to a single number. I do anticipate continued progress in our ability to assess the various components of military capability and the impact of funding on this capability.

MEDICAL CARE IMPROVEMENTS

Senator NUNN. What steps have been taken in the past year to improve the command accountability and quality of care delivered in the Air Force medical care system?

Senator ORR. The Air Force has taken steps during the past year to emphasize quality assurance programs and ensure the accountability of major commands in providing quality medical care. These efforts have involved replacing a directive which stressed risk management in medical care with a Quality Assurance in the Air Force Medical Service regulation that provides detailed information on effectively managing quality assurance programs, and expands guidance on the credentials and privileges process, surgical case review and morbidity and mortality review.

To emphasize our quality assurance programs, the major command surgeon generals have designated their respective directors of Professional Services as the command quality assurance coordinators. Also, each medical facility has assigned an officer as a full-time quality assurance coordinator. This system provides for a monthly review of quality care issues, a vehicle for reporting issues of potential Air Force interest, and a means for providing required oversight and assistance.

Procedures for reviewing, granting, and withdrawing practitioner privileges have been clarified and seventeen new credentials/privilege lists were developed for each of the major Air Force medical specialties. The surgeon general has also instituted a proctoring procedure to confirm that practitioners seeking defined privileges possess the requisite knowledge and skills.

Other efforts such as inpatient occurrence screening and the soon-to-be-installed, Automated Quality of Care Evaluation Support System, will help identify potentially important, unexpected events in treatment for timely review analysis and management action. These improvements will also ensure command accountability by providing trend data and analysis capability from the individual facility level to the Office of the Surgeon General.

The new quality assurance regulation requires medical facility commanders to act promptly against practitioners suspected of misconduct or improper medical care. Written reports are required through the command surgeon to the Surgeon General. The Air Force now also has a malpractice claims report system so that each time a claim is filed, the credentials committee at the practitioners assigned facility is notified of the claim and all pertinent facts.

The Surgeon General's Emergency Services Task Force has completed its review and a policy letter providing specific guidance has been distributed. Guidance covers the use and supervision of physician extenders in emergency services departments. Additionally, quality assurance training has been greatly expanded and symposia are held in the United States, Eurpoe, and the Orient. To date, over 850 personnel have received training through these symposia and other seminars.

[Expanded directive, Quality Assurance in the Air Force Medical Service follows:]

MEDICAL CARE DELIVERY

1. A significantly expanded directive, Quality Assurance in the Air Force Medical Service replaced an earlier regulation, which had its main emphasis on risk management in medical care delivery. This comprehensive document provides the specifics on the "how to" elements for effective management of quality assurance programs. It expanded guidance on the credentials and privileges process, surgical case review, and morbidity and mortality review.

2. Each major command surgeon has designated his Director of Professional Services as the command quality assurance coordinator. The command surgeon assures the effectiveness of quality assurance programs in his medical facilities through a review of their monthly quality assurance committee minutes and providing required oversight and assistance; by reporting problems and quality of care issues with potential Air Force interest or impact to the Air Force Quality Assurance/Risk Management Council; and by furnishing periodic activities letters to the Surgeon General as a vehicle to keep senior management well informed on specific adverse patient incidents.

3. Recognizing the need for dedicated resources to make medical quality assurance programs viable and effective, the Surgeon General directed that each facility

assign an officer as a full-time quality assurance coordinator. These officers were assigned "out-of-hide" from existing staff resources.

4. Procedures for reviewing, granting, and withdrawing practitioner privileges were further clarified with guidance on the use of seventeen new standardized credentials/privilege lists that were developed for each of the major specialties which are available in the Air Force. The Surgeon General initiated proctoring, a process in which a designated practitioner observes and confirms over a period of time that another practitioner, who seeks defined privileges, possesses the requisite knowledge and skills to exercise the privileges requested. Clearly defined criteria were established for identifying and determining a practitioner's skills and for monitoring quality assurance indicators at the medical facility level. The heart of these efforts is inpatient occurrence screening, a quality assurance assessment technique that identifies specific, potentially important, unexpected events of treatment to ensure their timely review, analysis, and subsequent management action. The Air Force Medical Service was the catalyst within the Department of Defense in developing occurrence screening. Having already tested and promoted it on an optional basis when the Department of Defense mandated its implementation for hospitals, the Air Force enjoyed a significant advantage.

5. The new quality assurance regulation now requires medical facility commanders and command surgeons to take prompt action against practitioners suspected of misconduct or improper medical care. Written reports are required from the commanders, through their command surgeon, to the Surgeon General.

6. Presently, command accountability is achieved, in part, by manual reporting of mortality and complication trends to higher headquarters. The Office of the Surgeon General has been deeply involved with Department of Defense and the other services in developing the Automated Quality of Care Evaluation Support System, an automated support system to be installed in all Air Force hospitals beginning in July 1985. It will provide microcomputer support for quality assurance programs, including provider credentialing and profiling, occurrence screening management, quality assurance problem activity tracking, and incident report analysis. The system will vastly improve the quality and timeliness of the evaluation of health care at both local and higher management levels.

7. Procedures for handling impaired practitioners were strengthened. Guidance was disseminated defining the scope of the problem and directing specific corrective actions. A new Inspector General checklist on impaired providers was developed to improve the monitoring of this area of concern. Medical facility commanders have been directed to use this checklist in their self-inspection programs.

8. Procedures were initiated whereby pertinent information on all Air Force medicolegal claims are provided by legal channels to the Medical Service. In addition to their use as teaching cases by medical staffs in peer review settings, the Air Force has initiated a Malpractice Claims Report system where each time a claim is filed, the credentials committee (at the facility where the allegedly negligent practitioner is assigned) received notification of the claim and the facts involved. A copy of each medical review of a claim is sent to the Surgeon General's Clinical Consultants Division for review and action. This allows the Medical Service to stay current on claims experience as the Air Force makes important policy decisions and personnel action determinations.

9. The Surgeon General appointed an Emergency Services Task Force to study all aspects of the management of this specialty function. Specifically addressed was the utilization of health care practitioners in emergency services. The Task Force culminated with the distribution of a policy letter, Emergency Services Guidelines, which provided specific guidance for the utilization and supervision of physician extenders in emergency services departments.

10. Quality assurance training has been greatly expanded. Quality Assurance symposia are taught annually in the United States, Europe, and the Orient. The purpose of this training is to clarify recent quality assurance program changes and explain helpful methods on effective program management. Since the establishment of the Surgeon General's Quality Assurance Directorate, over 850 personnel have received extensive training through the symposia and other seminars.

FIGHTER AND ATTACK AIRCRAFT PURCHASES FISCAL YEAR 1976 THROUGH FISCAL YEAR 1986

Senator NUNN. Gen. Gabriel, please provide for the record for each year, fiscal year 1976 through fiscal year 1986, the purchases of tactical fighter and attack aircraft ordered, and the average age of that fighter/attack force. .

General Gabriel. The purchases of tactical fighter and attack aircraft are as follows:

	Fiscal years—											
	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985[1]	1986[1]	Total
A-7D/K				12	12	6						30
A-10A	53	100	144	144	144	60	20					665
F-5E/F							3	3				6
F-15A/B/C/D/E	108	108	96	78	60	42	36	39	36	42	48	693
F-16A/B/C/D			105	145	175	180	120	120	144	150	180	1,319
Total	161	208	345	379	391	288	179	162	180	192	228	2,713

[1] Projected procurements

The average age of the fighter force by fiscal year follows.

[Note: Computation based on Total Aircraft Inventory (TAI). Average Age for combined Regular Air Force, Guard and Reserve fighter/attack aircraft.]

Average Age of Fighter/Attack/Interceptor Aircraft

Fiscal year—	*Years*
1976	8.8
1977	9.5
1978	9.7
1979	9.2
1980	9.3
1981	9.2
1982	9.1
1983	9.6
1984	10.0
1985	10.4
1986	10.7

BUDGET FOR O&M/SPARES AND AIRCRAFT

Senator Nunn. Didn't your budget for O&M and Spares go up a lot in 1980-1984?

General Gabriel. We are buying a force that is only modestly growing but becoming significantly more modern. New weapon systems require initial spares be provided during their first two years of operations to both establish a peacetime repair pipeline and support flying training. Also, war reserve stocks must be built-up to support wartime requirements. During the late 1970s when modernizing the force was the driving concern, readiness and sustainability funding suffered. It has taken an injection of funds to correct that imbalance; and when considering all competing priorities, the rate of force growth slowed to accomodate a readiness and sustainability catch-up. Initial spares have increased from $351M in fiscal year 1980 to $1.3B in fiscal year 1984 and replenishment spares grew from $871M in fiscal year 1980 to $3.4B in fiscal year 1984. In real dollars, the O&M budget grew at just over five percent per year during this period. The current Air Force program now represents balanced improvement across all mission areas while providing prudent funding for spares.

Senator Nunn. And your budget has doubled, but you can't afford aircraft?

General Gabriel. Prior to 1980, the emphasis in Air Force modernization was on procuring aircraft without procuring the necessary spare parts to keep them flying. In the four year period from 1980-1984, it is true that the Air Force O&M and Spares budget has doubled, while aircraft procurement has been reduced. This reflects a change in Air Force modernization priorities and is an attempt to place our spares program in balance with the number of aircraft which it will support.

AIR FORCE MUNITIONS INVENTORIES

Senator Nunn. What is the current state of Air Force munitions inventories (air-to-air and air-to-ground)?

General Gabriel. Our munitions inventories reflect the significant improvements we have made in sustainability over the last few years. For example, today we can load [deleted] more air to surface sorties with optimum munitions than we could in fiscal year 1983 and we have a sufficient number of older Vietnam era munitions to support all aircraft sorties for well over Defense Guidance objectives. The Air Force nonnuclear air-to-surface munitions inventory is made up primarily of general purpose bombs and older cluster bomb units. We have begun procuring modern guided munitions, and it will take a period of years to acquire them at economically feasible production rates. Examples of these munitions are Combined Effects Munitions (CBU-87), GBU-15 electro-optical bombs, BSU-49 Air Inflatable Retarders, and new countermeasures chaff and flares. Air-to-air missiles and other threat-oriented munition inventories present a similar picture. Examples of these threat-oriented munitions are air-to-air missiles, GATOR mine (CBU-89), and Durandal Runway Cratering munitions. Overall, 97 percent of the total munitions inventory is in serviceable, usable condition.

AIR FORCE-NAVY INITIATIVE PROGRESS

Senator NUNN. Gen. Gabriel, you have described in past years a series of initiatives that were the result of the Navy-Air Force Cooperation Agreement of October 25, 1982. What progress have you made on these initiatives in the past year, and how is this reflected in the budget?

General GABRIEL. We are making excellent progress on initiatives agreed upon in the 25 October 1982 Air Force-Navy Memorandum of Agreement on Joint USN-USAF Efforts for Enhancement of Joint Cooperation. The goal stated in the agreement is to provide operational commanders the most flexible, capable, and mutually enhancing mix of forces possible for joint operations against enemy forces. To accomplish this goal, the 1982 agreement provided for increased use of joint training opportunities in JCS exercises and on Service training ranges. USAF is planning to procure an Air Combat Maneuvering Instrumentation range capable of joint air-to-air training for the Homestead/Key West areas in FY 1987. The Navy is pursuing the development of a mobile sea range which will enable us to conduct instrumented training in joint maritime operations. We are sending a portion of our AWACS aircrew force to the one week Navy Anti-Air Warfare training course. Our joint efforts to develop and acquire commonly used munitions such as AIM 7/9, AMRAAM/ASRAAM, HARM with Advanced Radiation Seeker, Harpoon, Tomahawk/GLCM, and Maverick have resulted in improved interoperability as well as effectiveness. Recently, the four services agreed to formalize cross-Service participation in the annual Program Objective Memorandum development process. This agreement will help institutionalize cooperation among our programmers. For example, in fiscal year 1986, the Air Force and Navy have jointly funded 47 programs with an estimated total funding of $8B. These numbers reflect the high level of investment devoted to programs of joint Air Force-Navy interest. The spirit of cooperation and awareness brought about by these agreements continues to provide a framework for improved joint maritime operations.

STRATEGY FORCE MISMATCH

Senator NUNN. Do we have the resources to carry out the strategy in this year's defense guidance? Is there a resources gap? If so, how does this budget specifically close that gap. Will you be able to meet requirements of the strategy by the end of the current five year defense plan?

General GABRIEL. The principal goal of our strategy is to deter aggression against the United States, our friends, and allies. Deterrence has been successful for more than three decades and as long as we continue the necessary steps to modernize our strategic and theater forces, deterrence will remain credible. If deterrence should fail, the goal of the planning strategy is to meet the global threat simultaneously in three principal theatres—Europe, Southwest Asia, and the Pacific. Our current forces would assume a significant risk in addressing such simultaneous aggression, depending heavily on sequential actions based on strategic priorities. The modernization and increase in forces projected over the current five-year defense plan will narrow, but not close, the gap in Air Force resources required to meet strategy objectives and to reduce the associated risks. Funding in recent years has already resulted in significant progress in meeting both the combat and support asset requirements. This budget continues that trend.

COMMON IFF SYSTEM

Senator NUNN. General Gabriel, would you please give the Committee your assessment of how important you believe a common NATO-wide Identification-Friend-or-Foe (IFF) system to be to the effective use of both our tactical airpower and our limited ground-based air defense? Where would a common IFF system lie on your list of NATO's defense problems?

General **Gabriel**. A common NATO-wide identification system is essential. US/NATO air forces will be required to engage in operations across the entire European front where they might find themselves exposed to the air defenses of any other NATO country. A common identification system would significantly decrease the risk of fratricide, aid command and control, and would lead to greater tactical freedom and [deleted]. In light of NATO's capabilities to conduct tactical air operations against the current and future threat, I would place the need for a common IFF system as one of NATO's most pressing defense requirements.

GI BILL

Senator **Nunn**. General Gabriel, as you know last year Congress enacted a new contributory GI bill for recruits entering military service after July 1, 1985. Under this legislation, the Veterans' Administration, not the Air Force, will pay the costs of the basic educational benefits available under this bill to new recruits. How would you feel about this new GI bill if the Air Force had to pay for this new benefit out of its own budget? Is there anything in this year's budget that you would trade off to begin setting aside the funds that will be needed in a few years to pay for this new benefit?

How would you feel about paying for this new benefit out of an Air Force budget that was constrained to three percent real growth over the next five years?

General **Gabriel**. We have no experience base to quantify the appeal of recruitment value of the new GI bill. Once the impact is clear it would have to compete with other program requirements. The subject legislation provides for substantial discretionary "kickers" which, if implemented, would clearly be paid for by the services. These benefits could reach an individual high of $46,800. This would constitute an unfunded requirement and could be quite costly. Further, in a budget constrained to three percent real growth, support for an unknown, unfunded requirement would be even more tenuous.

Questions Submitted by Senator J. James Exon

SILO HARDNESS AND SUPERHARDENING

Senator **Exon**. It now seems that after years of being told that our missile silos were dangerously vulnerable, further research has revealed that our silos may in fact be stronger than first expected. Futhermore, "superhardening" technology is looking increasingly attractive. Are our silos actually stronger than we had thought several years back? If so, by what degree?

General **Gabriel**. Our most recent assessment of Minuteman silo hardness (started in 1982 and completed in 1984) [deleted]. This assessment was different from previous assessments in that it rated silo hardness on a wing-by-wing basis rather than as a force-wide average. [Deleted.] Specific hardness levels are classified Top Secret and available upon request.

Senator **Exon**. What have we learned from our R&D efforts in superhardening? When will we know enough about superhardening to be able to make a judgment on its practicality?

General **Gabriel**. The Air Force and Defense Nuclear Agency have completed about half of the Superhard Silo Technology Program started in fiscal year 1984. We have designed large size high explosive test beds capable of simulating the airblast environments superhard silos must survive and are now developing simulators to include the direct induced ground motions. The first two in the planned series of subscale structure tests have been accomplished and confirm our ability to design structures capable of surviving design loadings to [deleted] and retesting to over twice the design loading [deleted]. We expect to extend these results to larger sizes this year.

Results of cratering investigations confirm the small crater theory for ideal geologies. In addition, a nuclear cratering experiment is planned this year within an underground cavity at the Nevada Test Site to provide additional data on cratering phenomonology.

By late 1986, sufficient technical and cost data should be available to support a decision on whether or not we should begin Full Scale Development of superhard silos.

SICBM BASING MODES

Senator **Exon**. Last year, this committee was told that several basing modes are being studied for the Small ICBM or "Midgetman" missile. These include hardened, mobile launchers, superhardened silos, and deep basing. Which basing modes look the most promising? Are several basing modes likely to be selected in order to ensure missile survivability and complicate Soviet targeting problems?

General **Gabriel**. It is still too early to determine the most promising basing modes. The Air Force is considering multiple basing options with deployment variations for each option. We plan to complete our evaluation of these options by late 1986. We are considering Small ICBM missile effectiveness, environmental impacts, land availability, system reliability, system maintainability, life cycle costs, and other factors which may be affected by the various deployment concepts.

STRATEGIC COMMAND AND CONTROL

Senator **Exon**. The Administration has committed itself to providing a more effective and reliable strategic communications capability to control our nuclear forces. What new capabilities have been added in this area?

General **Gabriel**. There are several on-going initiatives to improve our current communications posture. The Ground Wave Emergency Network (GWEN) is in its final stages of development. GWEN is a network of low frequency radio relay stations using packet switching techniques to send data messages throughout the CONUS. It's primary [deleted]. Another communications enhancement is the launching of a Defense Satellite Communications System (DSCS) III satellite and the fielding of Jam Resistant Secure Communications terminals which make up a communications subsystem of DSCS. This permits timely reception of TW/AA information, and with the installation of super high frequency (SHF) satellite terminals in launch control centers provides responsive communications to the missile forces. [Deleted.] There is a program to put similar enclosures at all SAC Wing command posts beginning in fiscal year 1987 for assured connectivity. Other programs that were initiated as a result of the Administration's commitment to reliable strategic communications, and are scheduled for implementation during the fiscal year 1986-90 timeframe are: MILSTAR, mini-receive low frequency (LF) terminals for the bombers, EC-135 airborne command post upgrades, SHF terminals to launch control centers, and EMP protected dispersal communication packages.

WHAT SDI IS INTENDED TO PROTECT

Senator **Exon**. Clearly, any weapon we develop should be as effective as possible. What is the goal of effectiveness for SDI and what can we realistically expect?

Would it not be easier to mount a more effective defense of our land-based missiles and command and control facilities rather than trying to defend everything?

What would be the difference in cost and time in developing a ballistic missile defense of only our missile silos and command and control facilities as compared to the SDI as it is now configured?

Secretary **Orr**. The President has made it clear that the strategic defense initiative (SDI) is only a research effort, which may lead to a development program sometime in the future. Essentially, the SDI is a broadly-based concept that embodies more than just the defense of ICBM silos and command, control, and communication (C^3) facilities. Its ultimate goal is to reduce drastically our dependence on nuclear forces and not simply to increase the survivability of our land-based offensive and C^3 forces.

The ultimate goal of SDI envisions a future strategic environment in which the rules of the game are changed—a future in which the utility of both U.S. and Soviet ballistic missile forces are rendered "impotent and obsolete." This future does not look to increasing deterrence by increasing the capability of U.S. and allied retaliatory forces relative to the Soviet Union but rather seeks to increase deterrence by reducing, through defense, the capability of US offensive forces generally.

TACTICAL RECONNAISSANCE CAPABILITY

Senator **Exon**. The existing tactical reconnaissance fleet is made up primarily of the aging RF-4C PHANTOM II aircraft. There is great division over whether this aircraft should be replaced with another manned aircraft or an unmanned, remotely piloted vehicles (RPVs). The Air Force prefers another manned aircraft, probably a modified F-16 fighter.

What does the Air Force plan to replace the RF-4C with? Why?

General **Gabriel**. Increased threat and reduced RF-4C force structure have led to a major Air Force review of required future reconnaissance capabilities. Present alternatives include, but are not limited to, podded sensors compatible with modified fighter aircraft, augmentation/replacement with unmanned vehicles, upgrades to the RF-4C or a dedicated vehicle. On-going studies addressing this problem are incomplete, and any recommendations at this time would be premature. Life cycle costs and mission effectiveness for a number of systems are being investigated by Air Force Systems Command. The Advanced Tactical Air Reconnaissance System (ATARS) program is evaluating electro-optical sensors compatible with manned and unmanned tactical vehicles. These sensors offer the potential to improve the overall effectiveness of tactical reconnaissance and may be employed on any future Tactical Reconnaissance System.

Senator **Exon**. What consideration is being given to an unmanned reconnaissance platform or a mixture of manned and unmanned platforms?

General **Gabriel**. The Air Force is now in the final stages of major studies on theater reconnaissance which have led us to the conclusion that a mix of manned and unmanned platforms may be desired. We are presently staffing the Air Force requirement for an unmanned tactical reconnaissance air vehicle.

Senator **Exon**. Are the RF-4Cs being modified or upgraded in any way?

General **Gabriel**. Yes, the RF-4Cs are being modified to a limited extent to insure continued logistics supportability and successful operations in the current threat environment. Described below are the programs requested in the fiscal year 1986 budget request.

(a) PARKHILL Tactical Secure Voice: fiscal year 1986—$2.M Parkhill Secure Voice provides on-line encryption/decryption of the narrow band frequency ranges up to the secret level. The TSEC/KY-75 is designed for operation in all aircraft applications. This is a continuation of a program which began in fiscal year 1982.

(b) ALR-74 Radar Warning Receiver Update: fiscal year 1986—$65.9M (Includes F-4E and RF-4C)

This modification began in 1982 and will replace the current ALR-46 radar warning receiver with the ALR-74. This update will allow the F-4E/RF-4C to operate in the projected threat environment of the 1990s.

(c) Long Range Optical Photography (LOROP) Camera: fiscal year 1986—$6.4M. Six RF-4Cs will be equipped with a high resolution long range photographic capability. This added capability will provide better optical data as well as improve the survivability of the aircraft. Two aircraft were modified in fiscal year 1984 with this capability.

(d) RF-4 Radar Update: fiscal year 1986—$45.0M. This program began in fiscal year 1984 and will insure the continued logistics supportability of the RF-4C. The RF-4C Radar (APQ-99) will be modified by replacing obsolete and high failure components and installing the digital scan converter in both cockpits. Due to the age and technology changes, the existing APQ-99 has become non-supportable. The proposed modification will eliminate parts obsolescene. Additionally, maintenance cost savings are expected to be at least $9.0M per year.

(e) Structural Fatigue: fiscal year 1986—$2.0M. Engineering evaluation has determined that modification to the upper engine mounts and lower torque box skin on RF-4C aircraft is required. This modification was done on F-4C/D aircraft and will improve the structural integrity of the RF-4C aircraft.

AIRFIELDS AND CHEMICAL WEAPONS

Senator **Exon**. Our airfields and aircraft maintenance are very vulnerable to Soviet chemical attack. Wouldn't Soviet airfields be similarly vulnerable if we possessed chemical weapons? Could not our possession of chemical weapons deter the Soviets from using chemical weapons against our airfields?

General **Gabriel**. Certainly. Like us, the Soviets would suffer from a chemical attack. Recent studies show that the main impact of a chemical attack on a Soviet airfield would be a substantial degradation in sortie generation caused by personnel being forced to wear the protective ensemble. This productivity degradation would have a tremendous slowdown effect on their war effort. But today our lack of an effective retaliatory chemical weapon allows the Soviets to plan their war effort without the threat that we could deny them this virtual sanctuary. We must have a weapon that is compatible with modern aircraft and delivery tactics, and its chemical agent must be persistent in nature. In a war, our lack of such a weapon would put us at a severe disadvantage and could invite the use of chemical weapons against us. The most important thing we can do to deter chemical warfare is to reestablish a chemical retaliatory capability. By doing this, any potential adversary would realize that his use of chemical weapons against us or our allies would not be one-sided nor go unanswered; and that little military advantage would be gained by initiating chemical warfare.

Senator EXON. What conventional airfield denial weapons do we have or are developing?

General GABRIEL. Airfield denial weapons include both munitions which damage runway and taxiway surfaces and munitions which delay repair of those surfaces. The Air Force is currently procuring the French Durandal runway cratering weapon to provide a near-term capability. We are also procuring the CBU-89 GATOR system, an anti-armor/personnel mine system which can also be used to impede runway/taxiway clearance and repair operations. The Air Force is also developing a new submunition to significantly reduce sortie requirements, the Boosted Kinetic Energy Penetrator (BKEP), which will complete full scale development in Sep 85. BKEP will be packaged in a variety of carrier vehicles such as the SUU-64 Tactical Munitions Dispenser (TMD) for overflight delivery, the SUU-54 dispenser for short standoff, and potentially in the Tactical Missile System (TACMS) for long range standoff. Also, the British HB-876 airfield denial mine submunition is entering production in the United Kingdom for packaging in the JP-233 airfield attack system to be used by the Royal Air Force. When HB-876 is packaged with BKEP, it will significantly increase airfield closure time. In fiscal year 1986, the Air Force will begin packaging BKEP and HB-876 into the TMD, which will be called Direct Airfield Attack Combined Munition (DAACM). Because the TMD is certified for delivery from several aircraft types, DAACM will provide needed operational flexibility to attack airfields after defenses are neutralized and to attack other less heavily defended airfields. Also in fiscal year 1986, a powered version of the GBU-15 (AGM-130/B) will package BKEP and mine submunitions into the SUU-54 to provide the standoff required in heavily defended areas before those defenses are neutralized.

Senator EXON. What types of airfield denial weapons do the Soviets have or are developing?

General GABRIEL. The Soviets have several types of airfield denial weapons available. The most common are general purpose bombs in the 250kg and 500kg class. [Deleted] but it is certainly within their technology to do so.

We believe the Soviets have deployed specific runway cratering munitions in the 250kg and 500kg class [deleted].

The Soviets also have a small, air-delivered, pressure activated antipersonnel mine for area denial, patterned after a Vietnam-era U.S. mine. They have probably developed tripwire mines based on other U.S. designs.

Area denial could be achieved with chemical weapons. If the Soviets elected to use chemicals against an air base, they would probably drop 100kg or 250kg bombs filled with a [deleted]. Chemicals could also be delivered by short-range ballistic missiles, [deleted].

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

U.S./USSR CAPABILITY GAP

Senator LEVIN. General Gabriel, do you agree with the simple conclusion that overall "despite U.S. increases in defense spending, the gap between U.S. and Soviet military capabilities continues to grow?"

General GABRIEL. The Soviet buildup in strategic nuclear forces over the past decade dictated our first priority be to modernize our strategic deterrent forces. Our investment in the B-1B, Peacekeeper, C^3 improvements, ALCM equipped B-52s and development programs like the Advanced Cruise Missile (ACM), Advanced Technology Bomber (ATB), and small missile, will arrest the adverse trends in strategic offensive forces and restore a more favorable balance with the Soviets.

In the critical Western European theater, most measures of the NATO/Warsaw Pact conventional force balance continue to indicate a substantial Pact advantage. This situation persists in spite of a significant investment (37 percent of fiscal year 1986 TOA) to improve tactical and mobility forces.

MISSILE THROWWEIGHT

Senator LEVIN. General Gabriel, are we relatively better off now vis a vis throwweight of strategic nuclear missiles in the U.S.-Soviet inventories than we were in 1980?

General GABRIEL. No. From 1980 to 1985 the change in relative throw-weights of U.S. and Soviet strategic nuclear missile inventories favored the Soviets. In 1980 the

U.S. arsenal had throw-weight capability of [deleted] while Soviet systems had a [deleted] capability. To date, U.S. capability has decreased to [deleted] as the Soviet throw-weight capability has increased to [deleted]. Our orientation has been towards more accurate and higher yield weapons without increases in throwweight which is more in line with our national strategy of holding the Soviet leadership and strategic forces at risk.

STRATEGIC NUCLEAR WEAPON (RVS)

Senator Levin. Who has more strategic nuclear weapons deployed (RVs)–United States or the Soviets? What are the figures broken down by each leg of the Triad?

General Gabriel. The following is a comparison of deployed U.S. and Soviet weapons or reentry vehicles (RVs) by Triad leg.

	United States	Soviet
ICBM RVs		
SLBM RVs	Deleted	Deleted
Bomber Weapons		
Total	Deleted	Deleted

ABM TREATY

Senator Levin. Secretary Orr, do you agree we should reverse the erosion of the ABM treaty that has occurred over the last decade?

Secretary Orr. The matter of Soviet compliance with the ABM Treaty is being evaluated by both the President and the Congress. The President's "Report to Congress on Soviet Compliance with Arms Control Agreements" that was released recently, cites several areas of Soviet non-compliance with the ABM Treaty. These issues bear close scrutiny and every effort should be made to address them either in the Standing Consultative Committee (SCC) or formal diplomatic channels.

TREATY IMPACTS OF SDI

Senator Levin. Secretary Orr, is it credible to insist that the Soviets remain strictly within the confines of these treaty limitations while we, as a matter of the highest national priority, pursue a course in the SDI program which by the early 1990's will clearly carry us beyond the same limitations?

Secretary Orr. SDI is a research effort that is fully compliant with current U.S. treaty obligations. Its purpose is to provide data that would allow future informed decisions, perhaps in the early 1990's, on whether to proceed to full scale development and later deployment. Such follow-on efforts would be a matter for negotations at that time. By the same token, that the Soviets have long been conducting research into advanced technologies with antiballistic missile (ABM) applications. While both sides pursue ABM-related research not prohibited by existing treaties, both should strictly comply with the relevant provisions of existing agreements. Any potential future transition to greater reliance on strategic defenses must be orderly to avoid upsetting the strategic balance necessary for effective deterrence. Unilateral deployment of such defenses could adversely affect the strategic balance. For this reason, we should insist that the Soviets remain strictly within the confines of these relevant treaties unless, and until, they are modified to allow a balanced deployment of strategic defensive systems.

MULTITHEATER SUSTAINABILITY

Senator Levin. How sustainable is the Air Force in a protracted, multi-theater conventional conflict? Please identify your most critical deficiencies in each theater and identify those which could begin to be better redressed by additional funds in fiscal year 1986?

General Gabriel. Air Force sustainability is measured according to planned sortie requirements or flying hours in response to a changing threat. This changing threat drives force structure and wartime tasking adjustments, which in turn drive changes in resource mixes (WRM Spares and Munitions). In spite of these dynamic forces, sustainability continues to improve dramatically.

The DOD objective for sustaining tactical fighter forces is [deleted]. Using current assets, the Air Force could support 89 percent of the programmed sorties during a [deleted] multi-theater conventional conflict. The sustainability objective for strategic airlift is [deleted] and the Air Force could support 86 percent of the programmed flying hours during that period. For strategic airlift, however, the programmed level of activity is far short of the actual airlift requirement.

Our ability to sustain forces with munitions varies widely, depending on the specific munition being considered. For all munitions, based on the [deleted] Defense Guidance objective, the USAF can support 54 percent of the required aircraft sorties this year (fiscal year 1985) in the most demanding theater with the best munition for the mission it is flying. By using less-effective alternate munitions, the Air Force can support the total requirement during a [deleted] multi-theater conflict.

The most critical deficiencies in the European theater are [deleted]. The most critical deficiencies in the Pacific theater are the [deleted]. WRSK/BLSS requirements have been essentially fully funded since fiscal year 1984 and with the 2 year average leadtime, we will see great improvement in fiscal year 1986 and beyond. The fiscal year 1986 Budget again requests 100 percent of the requirement. Air-to-air missiles are being procured at economically feasible production rates. Over six million dollars are programmed for PACAF POL storage facilities infiscal year 1986. An additional $74M is programmed in the next 5 years. In fiscal years 1984 and 1985, NATO approved $155M for MEF at COBs. An additional $233M is programmed in NATO slice 37-40 (fiscal years 1986-89). We are working with NATO to improve these facilities at the COBs. In the fiscal year 1986 budget submission, we have again placed a high priority on improving the combat readiness as well as the sustainability of our forces. Although some acceleration of these programs is possible, the Air Force has planned for balanced improvements across the mission areas. Your support of this budget will allow us to meet the increasing threat and our global commitments.

READINESS AND SUSTAINABILITY ISSUES

Senator LEVIN. The material sustainability of our forces is largely described and reported on the basis of theater by theater war reserve fill rates. These reports demonstrate significant shortfalls in stock levels that raise serious questions as to how long we can sustain relative to our ability to move CONUS stocks to the theater and to the point industrial base production capacity is sufficient to meet wartime consumption and loss requirements. Considering the potential to move theater prepositioned stocks from one theater to another, how long can we sustain on a theater-by-theater basis?

General GABRIEL. Improving sustainability in one theater at the expense of prepositioned stocks in another theater would not, in most cases, be a prudent course of action and, in fact, could precipitate the spread of conflict from one region into a global war. In our major planning scenarios (NATO, Pacific, and Southwest Asia), the threat and the operating environments are different and, consequently, the force structure and prepositioning requirements are different. [Deleted.] In a conflict limited to one region, as prepositioned stocks were drawn down, replacement material would, first, be provided from the CONUS. Only as a last resort would theater assets be moved to another theater, and only for specific requirements approved on a line-item basis by the Joint Chiefs of Staff of the National Command Authority, taking full account of other bilateral or multilateral defense commitments. Policy aside, conflict in either the Pacific or Southwest Asia could be supported for a lengthy period [deleted] using assets earmarked for NATO, should the decision be made to do so. The reverse is not true, and in fact, [deleted] and repositioning of other theater stocks into NATO would be highly unlikely.

READINESS AND SUSTAINABILITY ISSUES

Senator LEVIN. Are U.S. war reserves intended solely for U.S. force consumption? Do current operational plans anticipate that certain types of sustainability stocks will be provided by our allies? How have these considerations been built into budget requirements? What effect do these anticipated drawdowns or additions to war reserves have on reported sustainability?

General GABRIEL. USAF war reserve stocks are sized in the Air Force budget to support our forces for each theater. [Deleted.] Since there are no operational plans in which sustainability stocks are supplied by our allies, we budget for the entire war reserve requirement to support our forces in each theater. When reporting sustainability, we only consider war reserves allocated for USAF use. [Deleted.]

Senator **Levin**. Are the U.S. taxpayers spending their money to buy ammunition and other supplies to be given to our NATO allies in a war if needed, because our allies are unwilling to spend their own tax dollars for them?

Secretary **Orr**. No. The Air Force requirement for ammunition and supplies is based on a level of sustainability as defined by OSD. In the European theater, this requirement is sized on the expenditure rate of U.S. forces only. There are no operational plans which call for supplies and ammunition to be provided to our allies. Therefore, the ammunition and supplies purchased by U.S. tax dollars are solely to satisfy the U.S. requirement.

Senator **Levin**. DOD's goal is to reduce depot maintenance backlogs to zero. As additional equipment is added to the inventory in ever increasing quantities throughout the 1980's, by how much will Air Force depot maintenance budgets have to be increased to accommodate the goal. If depot maintenance budgets cannot be increased to meet the goal, how will force readiness be affected? Are sufficient funds contained in the fiscal years 1986-90 Air Force defense program to reach that objective and if not, why not? Provide yearly totals for funding, requirement, and backlog.

General **Gabriel**. The Air Force depot maintenance budget has been increased by approximately $2.5B during the five year period of fiscal years 1986-90 over the fiscal year 1985 funding level. To accommodate changing equipment inventories and activity levels, sufficient funding has been provided to depot maintenance budgets to meet all goals of force readiness. The Air Force has a manageable depot maintenance backlog of $60.0M in fiscal year 1986, and funds are provided in fiscal year 1987 to eliminate this backlog. All known requirements in fiscal years 1987-90 are fully funded with no projected backlogs.

THE B-1B BOMBER TECHNOLOGY MODERNIZATION (TECH MOD) PROGRAM

Senator **Levin**. The Air Force Technology Modernization Program (Tech Mod) is designed to reduce the acquisition costs of weapon systems through enhanced production efficiency. The B-1B program has received significant funding from the Tech Mod line (PE 78011F). Early in the B-1B program savings from Tech Mod were projected at over $800M. The projections were subsequently reduced to $500M in early 1984.

What are the current projected savings to the B-1B program for Tech Mod efforts?

Secretary **Orr**. The current projected savings to the B-1B program from Tech Mod efforts are $150M. B-1B jet engine Tech Mod projects are benefiting other DOD programs and we project an additional $120M savings to the government outside the B-1B. For example, the B-1B Tech Mod office is providing applicable program information to the C-17 Tech Mod office.

Senator **Levin**. What is the direct government funding for Tech Mod broken out by B-1B program funds (PE 11126F) and Tech Mod program funds (PE 78011F) and other funds?

Secretary **Orr**. Direct government funding for B-1B Tech Mod projects has been:

[In millions of dollars]

	Fiscal year 1983 and prior	Fiscal year 1984
PE 11126F	20.3	1.1
PE 78011F	9.5	37.2

Senator **Levin**. Provide the net government discounted cash flow for each B-1B Tech Mod effort.

Secretary **Orr**. Discounted cash flow on B-1B Tech Mod efforts cannot be computed until final contracts are negotiated. The first Tech Mod projects were implemented with change orders which are not yet definitized. The remaining projects will be implemented with the award of the multiyear procurement contracts now being negotiated. We anticipate that savings could be available as early as June 1985.

Senator **Levin**. How has the B-1B program budget been affected by the Tech Mod program?

Secretary Orr. We have pursued a number of innovative management actions to execute the B-1B program within the directed technological, schedule, and cost constraints. One of these initiatives, Tech Mod, involves the use of "seed money" to develop and integrate advanced manufacturing systems and production technologies. Contractors and the government agree to share the savings that accrue once the contractor has invested in the necessary capital equipment. By investing this government "seed money" up front, B-1B contractors have been able to lower production costs for the B-1B and other defense programs as well. To the extent that these efficiencies are anticipated over the course of the B-1B production effort, the B-1B outyear budgets have been reduced by the Tech Mod initiative.

Senator Levin. Explain why Tech Mod savings projections continue to decrease and what actions the Air Force is taking to stop this decline.

Secretary Orr. Projected Tech Mod savings have decreased for a number of reasons. There is a "window of opportunity" to implement cost savings projects on a production line. That window starts to close quickly as production efforts begin. As production accelerates, opportunities to start projects that generate savings diminish rapidly. Early savings estimates were optimistic because the "window of opportunity" closed faster then expected. The B-1B was the first Tech Mod program that attempted to reduce target costs for each project implemented. Also, the B-1B was the first program to use the return on investment (ROI) incentive method for Tech Mod projects. These initiatives extended negotiations as the "window" started closing around August 1983. None of the associate contractors had firm agreements completed at that time. Rockwell's Program Management Contract for Tech Mod was not signed until November 1984. The rapid acceleration to rate production and the small buy of 100 aircraft have limited savings opportunities in this area.

The B-1B Program Office has aggressively worked to overcome these difficulties. Initially, significant program funds were used because available PE 78011F funding was insufficient. The Program Office approved five Tech Mod projects, while negotiating an umbrella agreement to cover future projects. Change orders were used to start projects quickly to achieve the most savings. The Program Office plans to include all remaining Tech Mod projects in the multiyear procurement contracts now being negotiated.

THE B-1B BOMBER

Senator Levin. The Air Force has scheduled multiyear contracts to be negotiated and awarded by March 1985. Provide the following information regarding multiyear contracts.

a. Multiyear savings by contractor in then year, base year, and discounted dollars.

b. Source of multiyear savings, e.g., subcontracts, overhead, materials, etc.

c. Compare by prime contractor, actual negotiated contract amounts with Air Force budget estimates for the same effort.

d. Provide the same comparison as in C above except compare negotiated values to the fiscal year 1985 budget estimate.

Secretary Orr. In January 1983, initial estimates of savings were presented to the Congress. These data can be summarized as follows:

MULTIYEAR SAVINGS

[In millions of dollars]

Category	Then year	Base year	Discounted
Airframe	774.5	557.0	303.5
Offensive Avionics	123.9	79.9	28.3
Defensive Avionics	89.4	48.8	3.6
Engine	200.4	135.8	63.1
Total	1,188.2	821.5	398.5

At this point, only the engine contract has been negotiated. As previously reported to the Congress, the validated savings realized on this contract by going multiyear instead of annual ($209.8M) were slightly higher than originally estimated ($200.4M). The specific definitized contract value of the engine multiyear effort was $1,575.0M, while the originally estimated contract value was $1,937.8M. We will submit savings comparison data required by the Apropriation Committees' "two-track" review process as we definitize each of the other three contracts.

This type of comparison is difficult to accomplish for a multiyear contract since by definition multiple fiscal years are involved. Each B-1B prime multiyear contract covers fiscal year 1983, fiscal year 1984, fiscal year 1985, and fiscal year 1986 funding as a part of its baseline. Full contract values were estimated in the original multiyear exhibits and will be provided again as part of the validation "second track" Congressional notice. We provided this data in September 1984 for the engine contract and will provide this data for the other contracts as we complete the negotiation and definitization process sometime between March and June 1985.

Senator LEVIN. The Air Force has scheduled multiyear contracts to be negotiated and awarded by March 1985. Provide the following information regarding multiyear contracts.

a. Multiyear savings by contractor in then year, base year, and discounted dollars.

b. Source of multiyear savings, e.g., subcontracts, overhead, materials, etc.

c. Compare by prime contractor, actual negotiated contract amounts with Air Force budget estimates for the same effort.

d. Provide the same comparison as in C above except compare negotiated values to the fiscal year 1985 budget estimate.

e. Provide a schedule of the major subcontractors and the status of their multiyear negotiations with the four associate contractors.

Answer. Answers to questions a through d were provided on 20 February 1985 with the understanding that we would provide an answer to question e. as early as possible. The following information on the status of major B-1B multiyear subcontract negotiations is provided:

Component	Subcontractor	Complete	In process	Pending[1]
Prime contractor: Rockwell:				
AFT fuselage	Vought	X		
AFT Inter fuselage	Vought	X		
Engine access doors	Kaman			X
Engine shroud	Aeronca	X		
Horizontal stabilizer	Martin		X	
Mode control vane	Martin	X		
Rudder and fairing	Kaman			X
Tail warning radome	Heath		X	
Vertical stabilizer	Martin		X	
Wing	AVCO			X
Prime Contractor: AIL:				
Transmitters	Northrop	X		
RF antennas	SEDCO	X		
Transmitter	General Electric	X		
Prime Contractor: Boeing:				
Radar	Westinghouse		X	
Computer control unit and memory	IBM	X		
Electrical display unit	Sanders	X		
Displays and drivers	Sperry	X		
Data transfer unit	Sundtrand	X		
Inertial navigation set	Singer	X		
Prime Contractor: General Electric:				
Fuel Injector and Augmentor	Parker Hannifin	X		
Augmentor case and ducts	Chemtronics	X		
Fan stater case	UNC Tech Products	X		
Main engine control	Woodward Governor	X		
Stage 2 fan blades	MAL Tool	X		
Gear and gear shaft	Western Gear	X		
Turbine blades	TRW	X		
Stage 2 HPT disk	Wyman Gordon	X		
Fuel pumps	Vicars	X		
MAC-54 alloy	Inco Alloys[2]	X		

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[1] Proposal analysis and fact finding have been completed, but negotiations have not yet begun.

[2] This is not a multiyear contract.

SMALL ICBM

Senator **Levin**. Could a small ICBM system with hard mobile launchers be developed sooner, at less risk, and at less cost if the missile were allowed to weigh more than the congressional imposed limit of 33,000 pounds? Please explain. If no such analysis has been done, please explain.

General **Gabriel**. The pacing element of the Small ICBM Hard Mobile weapon system is not the missile per se but the time required to define, develop, test, and produce the hardened mobile launcher vehicle while simultaneously integrating the missile. The Small ICBM deployment date is predicated on developing the missile and the basing mode, then integrating the two; increasing the weight would not shorten the deployment date.

Senator **Levin**. Would a 33,000 pound missile have the capability to use penetration aids without degrading range or payload capability? If not, please explain.

General **Gabriel**. [Deleted.] The baseline SICBM requirement provides for a 1,000 pound payload to include a modified Advanced Inertial Reference Sphere (AIRS), a MK-21 reentry vehicle, and the location and volume for future penetration aids deployment. [Deleted.] However, as the Scowcroft Commission report indicated, no one system or concept can or should be expected to do everything required of the ICBM force. Peacekeeper has sufficient throwweight to accommodate penaids should there be a mission requiring them.

Senator **Levin**. What are the most difficult technological challenges involved with development of the small ICBM? Categorize the risk of each challenge as low, moderate, or high and explain the rationale for the risk assignment.

General **Gabriel**. There are two major challenges relative to the Small ICBM (missile only). The guidance and control subsystems, especially when the missile is deployed in a mobile mode, have moderate risk because the baseline guidance and control system (G&C) is the same as is being used on Peacekeeper. We are attempting to reduce this risk by developing parallel G&C systems to compete against the baseline. The propulsion system development also has moderate risk because of the need to reduce weight and improve efficiency. The necessary technology has been validated in advanced development testing but will require additional validation during pre-full scale development. Additional challenges are associated with a hard mobile launcher for the small ICBM. These include resistance to nuclear blast, shock and radiation, and physical security. Each of these challenges present moderate risk. These challenges are also present in other potential basing modes.

Senator **Levin**. What are the most difficult technological challenges associated with development of the hard mobile launchers? Categorize the risk of each challenge as low, moderate, or high and explain the rationale for the risk assignment.

General **Gabriel**. The most difficult technological challenges associated with the Hard Mobile Launcher are as follows.

Resistance to nuclear blast and shock effects are assessed as moderate risk because the real nuclear effects require further definition and evaluation. Then engineering designs must be developed to permit survivable HMLs in this projected environment.

Resistance to nuclear radiation effects are assessed as moderate risk because electronic parts must be hardened to the same level as the missile components. The structure of the HML will provide little shielding due to its transparency to high-energy nuclear radiation.

The Physical Security Subsystem is assessed a moderate risk in order to achieve a balanced accommodation of cost versus security protection versus HML mobile performance.

Senator **Levin**. What are the most difficult technological challenges associated with development of hard silos? Categorize the risk of each challenge as low, moderate, or high and explain the rationale for the risk assignment.

General **Gabriel**. The major technological challenges and their relative risk appear to be as follows.

Structural hardness is currently assessed as low risk based upon the impressive progress of the testing to date. The questions related to scaling results to full size should be resolved over the next several months, and designs for enhanced levels of structural hardness are beginning test.

Mechanical hardness is currently assessed as moderate risk principally for two reasons. First, additional results of cratering and related effects analysis and testing are required to better define silo motion. Secondly, our mechanical components analysis and testing is preceding more slowly than structural testing and the loading is difficult to simulate. However, mechanical hardness is not considered high risk because silo length and diameter can be increased to provide additional rattle space at higher cost.

Electrical hardness is assessed as a moderate risk because some questions remain to be resolved on response to Source Region Electromagnetic Pulse, survival of cable penetrations to silo motion and its interaction with the soil, and the development of suitable electrical surge arrestors.

Senator LEVIN. Is superhardening U.S. silos a viable basing option considering evolving maneuvering reentry vehicle technology? Please explain.

Secretary ORR. Yes, we believe so. Deployment of a portion of our ICBM forces in superhard silos could substantially improve the survivability of our ICBM forces to an attack by current and projected Soviet ICBMs that are MIRVed with low yield, accurate ballistic reentry vehicles. While the development and deployment of a sizable number of precision MaRVs against superhard silos might erode this survivability improvement, it would take time to develop and would extract a high price from a potential attacker.

Deployment of acceptable MaRVs for ICBMs would be no simple task and would take a substantial amount of development time and effort. These systems, which rely on terminal sensors to determine their position relative to the target, will be much more complex, making development of acceptably high reliability and low probability of jamming or spoofing a difficult job. Furthermore, they would most likely be larger in size than non-MaRVed vehicles of the same yield which would require either the reduction of warhead yield or a reduction in the number of ICBM reentry vehicles for a given throwweight capability. The former makes these systems less attractive weapons for other targets (e.g., mobile SICBMs) and thus reduces retargeting flexibility; the latter would reduce the number of warheads deployed.

Finally, if ICBM warhead limits were imposed, as proposed during START negotiations, and if we deploy our ICBMs in a number of basing modes (including superhardening) as suggested by the Scowcroft Commission, the survivability of our ICBM forces will be enhanced.

Senator LEVIN. In the absence of limits on ICBM reentry vehicles, is hard mobile launchers a viable basing option? Can the Soviets effectively neutralize the system by deploying more reentry vehicles? Please explain.

General GABRIEL. The hard mobile launcher (HML) is a viable basing option even in the absence of limits on ICBM reentry vehicles. There are two ways that the Soviets could increase the number of ICBM reentry vehicles. First, for a fixed throwweight they could fractionate into larger numbers of reentry vehicles. However, lethal area generation for a given throwweight does not appreciably vary with the fractionation of the payload. Since the mobile ICBM derives its survivability from area generation, its survivability is relatively insensitive to how the Soviets fractionate a fixed payload. Second, they could increase the deployed throwweight by either deploying more ICBMs or replacing existing missiles with larger ones. In either case, the SICBM/HML could be deployed in larger areas, or the HMLs could be hardened more, or defended. Certainly there exists an upper bound to how much area the HML can generate to stay ahead of the Soviets—but there is also a practical limit to how much the Soviets could or would be willing to devote to expand their ICBM force to counter the single RV SICBM.

QUESTIONS SUBMITTED BY SENATOR ALAN J. DIXON

NEW STEAM PLANT AT CHANUTE AFB

Senator DIXON. Mr. Secretary, the Air Force is involved in a different approach to contracting for a new steam plant at Chanute Air Force Base. This committee, particularly Senator Thurmond and the Military Construction Subcommittee, authorized the Air Force to experiment with a new approach in building this necessary power plant.

Instead of pursuing the conventional approach to building a power plant with Military Construction funds, the Air Force was directed to experiment contracting with a local utility which would finance, design, build and operate the plant. The utility would recoup its investment through long-term sales of steam to the Air Force. Are you familiar with the concept at Chanute Air Force Base?

It appears to me that the Air Force is dragging its feet in getting this Chanute project under control. Let me give you the chronology to date:

The third party effort at Chanute was directed by the fiscal year 1984 Milcon Authorization Act which Public Law 98-115, dated October 11, 1983.

A request for proposal was issued on January 25, 1984 asking industry to bid on this concept. This RFP asked for proposals by April 10, 1984 and indicated that a contract would be awarded by October 1, 1984.

The date for the receipt of the proposals was extended to May 10, 1984 and I understand that the Air Force did receive proposals on that date.

Since that date there has been all kinds of bureaucratic fumbling, but basically the Air Force has not yet—to this date—started negotiations with the low bidder.

It certainly appears to me that the Air Force bureaucracy is trying to stall this contracting concept. I see no reason that it should take nearly 18 months to get a project like this under contract.

Is the Air Force serious about this effort?

Would you please look into this issue personally and get back to me on two issues:

Can you explain why it has taken so long to get to the point where we are now?

Also I would like to get a schedule for the remaining milestones to get this project awarded—when will negotiations start, when will a contract be awarded, etc.? I recognize, of course, that this approach must be shown to be cost effective when compared to conventional methods and there will be no contract if it is not cost effective. However, if this approach is not going to work, I want to know so we can get on with building a new power plant at Chanute using the conventional approach.

Secretary **Orr**. It has taken a long time to resolve this, our first third party effort for a heating plant in the Air Force. The apparent delay stems from careful planning associated with the long-term of the potential contract, and the unusual nature and complexity of the project. The contracting activity is following the normal procedures required by regulation for reviewing proposals associated with this potential 30-year contract involving such a large private investment. The AF is nearing completion of the negotiation objective and plans to open formal negotiations in mid-March. We anticipate concluding negotiations and source selection in late April. At that time, the selected offeror's 30-year life cycle cost will be compared to the Government's 30-year life cycle cost to determine whether a contract should be awarded or whether to proceed with our request for MILCON funding.

Chairman **Goldwater**. The Committtee is adjourned.

[Whereupon, at 11:45 a.m., the committee adjourned, subject to the call of the Chair.]

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